The **future** of **electronic entertainment** issue#95

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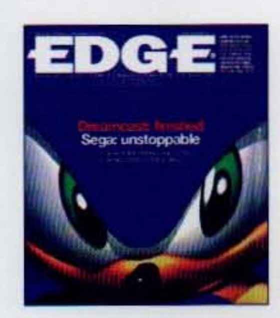
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Previewed: Shenmue
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Tempest 3000, 7 Bla
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Dreamcast: finished
Sega: unstoppable

How one week turned an also-ran into one of the industry's most feared players





What is Sonic? This may seem like an odd question, but during a period of significant change it is one worth pondering. At the very least he is a collection of pixels bouncing around a television screen. At most, he is an icon, a visual motif whose existence stands for everything pure and true about videogaming – he wasn't part of the supposed videogames-are-the-new-cool movement of the mid-'90s, he simply existed as an element of supremely affecting examples of electronic entertainment. Which is probably why dyed-in-the-wool Segaholics adore him so – and why the prospect of seeing him appear on non-Sega-branded platforms in the future has caused such an uproar among videogame industry players since That Announcement.

Edge was aware of Sega's multiplatform future way back in March of last year, when word first leaked that *Crazy Taxi* was making its way to PlayStation2 via Acclaim. Crucially, however, going forward the publishing revenues from many further Sega properties will be lining the pockets of Sega itself. Pockets which haven't seen much action for too long.

Many **Edge** readers will have a gaming history that reaches back to 8bit home computing when the ZX Spectrum, Amstrad CPC, and Commodore 64 reigned, when playing Sega games on non-Sega hardware didn't even register as something out of the ordinary; when US Gold released a conversion of the *OutRun* coin-op for all major home formats and watched it effortlessly slam into the number-one chart slot and remain there like a limpet.

Once Sega gets into its stride later this year and into 2002, the all-formats charts may well depict a once-familiar picture, and the circle will be complete. However messily Sega's new direction was handled in global terms, now that the dust has begun to settle it has become clear that, freed from the materials, inventory, and marketing concerns associated with hardware manufacture, the company will soon be enjoying a new lease of life – something that seems to have even thirdparty king Electronic Arts running scared.

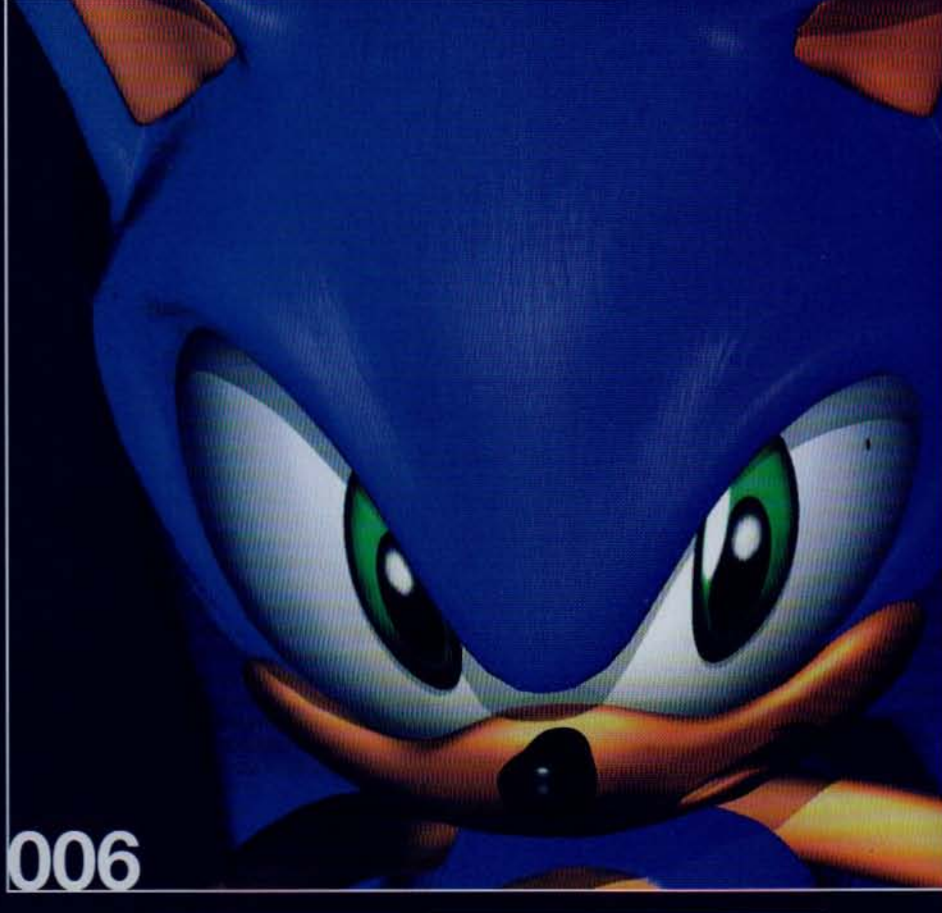
Read **Edge**'s extended Sega news report beginning this month on p8. And remember that it doesn't matter what badge adorns the front of the box, it's what's weaving its magic inside that counts. Sonic may well smile.

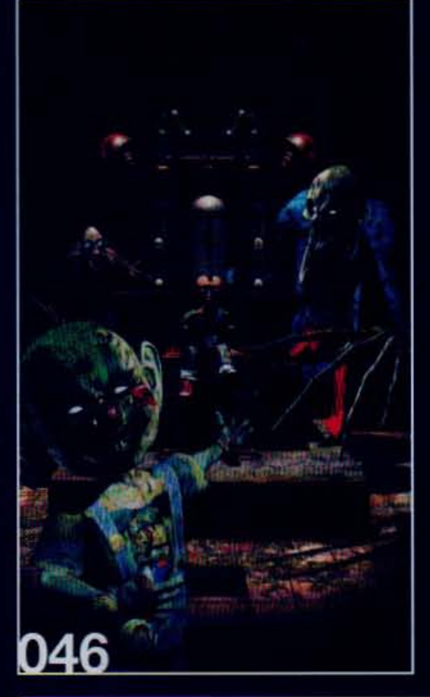


Features













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The Future Network is a public company quoted on the London Stock Exchange.



Bath London **Milan** Munich
New York Paris **San Francisco**



Printed in the UK



ABC
(Audit Bureau of Circulation)

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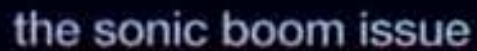
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Pre-Press, Bath Phoenix Repro, Bath

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Regulars

Testscreen

Print
Cradley Print, Warley, West Midlands

Production of Edge
Hardware: Power Macintosh, G3, G4 Cube, i-Book, iMac
Software: QuarkXPress, Adobe Photoshop, Macromedia FreeHand, and Nisus Writer **Typography:** (Adobe®) Helvetica [illegible], Light, Roman, **Medium**, **Bold**

Thanks to Peter Kaye

"Goddammit, I'd piss on a spark plug if I thought it'd do any good!"

frontend ▷▷▷▷

News and views from e-entertainment's cutting edge



Virtua Fighter 4's Lau Chan in his Naomi 2 incarnation. The game will make its home debut on PS2

Sega shifts focus and comes out fighting

After its dramatic decision to dump console manufacturing and focus exclusively on developing software, a new, leaner Sega emerges. Edge tracks the change as it happened, and looks forward to PS2, Naomi 2, and beyond...

January saw Sega make the switch from being a consumer hardware manufacturer to a thirdparty videogame developer in a move that rocked the industry. Before looking at what the future holds for the Japanese softco, **Edge** relates the events as they unfolded in Japan...

Saturday, January 20, Marion Building 11F, Ginza-Yurakucho

Sega holds a lavish ceremony in order to unveil 'Shenmue: The Movie', a 90-minute, entirely English-language film prepared from footage of one of the company's most critically acclaimed Dreamcast titles to date. Two theatre-style screenings serve the viewing needs of 600 delegates at a time. But following the movie comes the real reason why most have turned up: a taster of *Shenmue II*. The gobbets on offer fail to sufficiently thrill, however, consisting as they do of strangely empty scenes. Project director Yu Suzuki takes to the stage, along with three Japanese voice actors, in order to evangelise their work. Finally, a restless audience sits back to discover when the sequel will be released. But Suzuki-san will not commit. All he will offer is that the game will ship before the release of XBox. Rumblings indicate that Sega had originally intended to offer a more fulsome demonstration of *Shenmue II*, but an unknown factor came to bear, resulting in what was ultimately a disappointment. It remains a mystery as to why Sega should stage such an elaborate and obviously expensive event at a time when it does not have money to throw around.



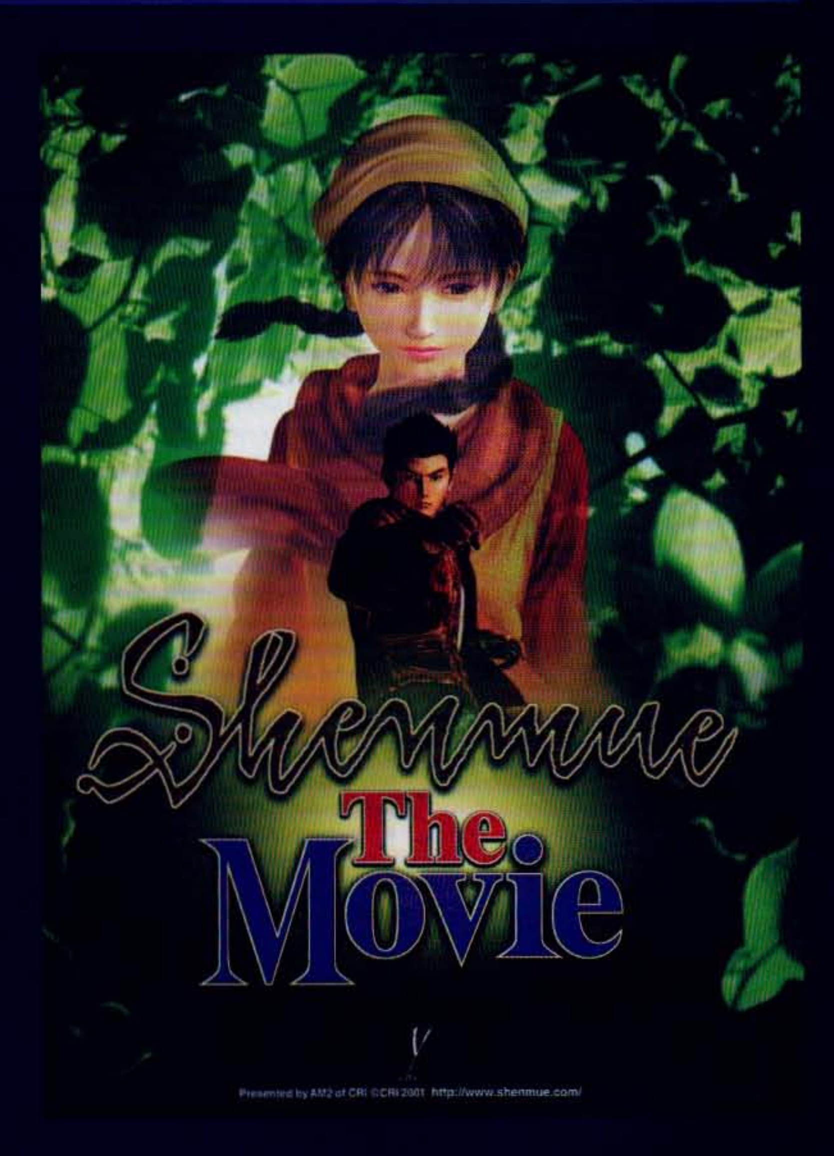




Gamers eager for a glimpse of the next chapter in Ryo's quest, via *Shenmue II*, were left disappointed by some oddly empty sequences and locations

Monday, January 21, Takanawa Prince Hotel, Shinagawa

Just as last year, Sega's parent organisation, the CSK group, holds its Business New Year Conference. As well as **Edge**, a vast number of Sega executives are in attendance, from every element beneath the CSK umbrella. A series of inordinately detailed analysis presentations lasts for five hours, but a number of buzz words and phrases ensure that the 3,000 delegates retain consciousness – chiefly mention of developments for PCs, handheld devices, and, most importantly, consoles from other manufacturers. Following the presentation, Sega's dinner function gets underway. Around the massive hall sit Dreamcast demo pods playing host to the likes of *Daytona USA 2001* and *Phantasy Star Online*, while Sega's new twoplayer karaoke peripheral, fashioned almost identically to its Zip drive unit, is officially unveiled. But as the evening progresses talk turns away from Dreamcast software and on to PlayStation2. Speaking to a Sega representative, it is not clear whether or not solid word has been leaked from within the company, but it is clear that certain employees are anxious about the company's plans for 2001. Speaking unofficially, Sega insiders reveal that an internal deadline exists within the group: it is committed to making an announcement before the end of January. More dinner-table talk reveals that this is directly linked with multiplatform development.



The party finishes without concrete evidence. Just over a week remains for Sega to unveil its new plans.

Wednesday, January 24, Sega HQ, Ota-ku

In a brief statement, Sega announces that it is to cease Dreamcast production, but that it is committed to supporting the platform throughout 2001, releasing a list of titles in currently in production. Confusion hits the Japanese videogame sector with a crash. Sega's stock will raise around 30 per cent in value over the next two days. Sega also mentions plans to use Dreamcast



On January 20, 'Shenmue: The Movie' was demonstrated to an eager public, followed by *Shenmue II*. Yu Suzuki and three voice actors were on hand to evangelise







While it has yet to receive a western release, *Sakura Taisen*, which combines giant robots in a hybrid mecha combat and dating sim, is already in development for PlayStation2

technology in set-top box environments, but this has little or no impact. Industry watchers in Japan know that beyond this revelation lies the real juice.

In a matter of minutes, the confusion has reached overseas to Sega of America and Europe. Either the two western divisions were not aware that the announcement was on the cards, or they simply learned too late. Some perceive Sega Japan's manoeuvrings as a stab in the back to its overseas representatives. Others simply put it down to a lack of organisation within the Japanese arm.

A Japanese newspaper, *Nikkei Shinburn*, is the first media outlet to break the news, but it does not take long for Japanese TV journalists to begin feasting upon it. Sega, it would appear, did not anticipate their reaction: most reports paint the company in an extremely negative light, saying that great games do not exist on Dreamcast, while the opposite is true on PlayStation2. This turns out to be a good day for SCEI's communication department.

As the news begins to filter through to thirdparty videogame developers across Japan, emergency meetings are hastily arranged. The talk among them is clear: freed from the shackles of hardware production, as a software-only company Sega is a new danger. While PlayStation2 hardware sales have proved healthy in its domestic territory, the same cannot be said for software. With the arrival of a competitor the size of Sega, the situation for other PS2 developers can only get worse – and don't they know it.

Thursday, January 25, TV Asahi, Roppongi

Following Sega's hardware-related news comes the announcement of an unusual new title, a game focused very much on Japanese tastes, featuring famous native actors in a sort of TV series-themed adventure title. Delivered on three GD-ROMs (the game is, naturally, heavy on FMV sequences), the unusually monikered *es* is a cooperative undertaking from three companies – TV Asahi, Sega Dentsu, and Forsam – and will be released in Japan on April 5. Sega's representative concludes his presentation of the game thus: "It would be sad to make this game for Dreamcast only. We will bring it to another platform." And so *es* becomes Sega's first multiplatform title.

Wednesday, January 31, Palace Hotel, Otemachi

Today is the day: Sega is expected to officially firm up its plans for the future. And this it does, confirming that Dreamcast is finished, along with Sega's long presence in the consumer hardware market. Heavy layoffs in its overseas divisions are revealed, although specifics will not be discussed. Sega will now be a thirdparty software developer. Wasting no time, it reveals its first wave of titles.

It's clear that Sonic Team is oriented towards Nintendo (rumours from last year's SpaceWorld reported Yuji Naka's interest in the Kyoto giant's hardware, and Nintendo has even demonstrated the potential of its upcoming hardware directly to Sega staff), so learning of the existence of *Sonic The Hedgehog Advance* (working title) is no great shakes. Of greater consequence is that *Virtua Fighter 4* (previously *VFX*) is to make its home debut on PlayStation2. By citing such a high-profile series in this regard, Sega is clearly assuring media and investors alike that it is serious about its future as a thirdparty developer: going forward its work outside of the Dreamcast sector will not lie in hand-me-downs, but with its biggest brands.

The confusion that so visibly reigned







Set to compete with other mecha titles such as *Armored Core 2* and *ZOE* on PS2, *Sakura Taisen*, a much more established franchise than either, is likely to be a success



The announcement by Sega of Japan on January 31 that it is to become a platform-agnostic software developer seemed to take both SOA and SOE by surprise. Consequently, much misreporting appeared before the two subsidiaries officially stated revised business strategies

mere days ago has now subsided, and the Sega group as a whole is beginning to get its house in order. The shift in focus has been a messy one – especially for the western divisions – and Sega appears keen to get the process over and done with as soon as possible. The fact that its first non-Dreamcast games will appear in March gives some explanation of the January deadline Sega insiders spoke of last week. The company is evidently keen to open up various channels to its coffers as soon as possible.

Sega's next move

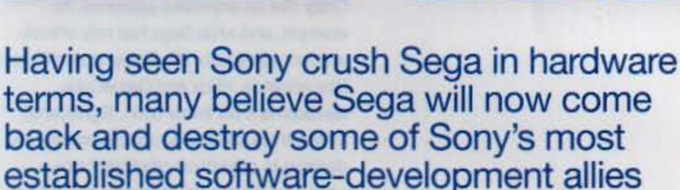
The first two years of Sega's life as a thirdparty developer will obviously represent a time of transition, but the company has the potential to become a significantly profitable publisher in this fashion. In the arcade sector, it seems poised to effortlessly retain its position as number one. Many Japanese observers see Sega's changes with some pessimism, however. Having seen Sony crush Sega in terms of consumer hardware, many believe that Sega will now come back and destroy some of Sony's most established software-development allies. Some of the more extremist analysts have been pondering the possibility of a two-way alliance between Sega and Nintendo, suggesting that the consequences of such a move would prove disastrous for other manufacturers. In panic mode, many Japanese thirdparty developers are known to be looking further afield in an effort to plan a secure future – and to many of them that means XBox. But Sega is already firmly ensconsed in this regard itself – its various Japanese development divisions are known to have signed up with Microsoft even before the recent multiplatform plans were revealed. For Japanese developers fearing Sega's new-found freedom, the forthcoming AOU





show will present an interesting battle: Namco's *Soul Calibur 2* versus Sega's *Virtua Fighter 4*. Though they use different technology sets, both titles are PS2-bound. By the end of this year it should become clear how much Sega is to be feared.

Moving on, Sega has committed to a three-pronged business strategy. At the heart of its revised mission statement is platform-agnostic software development, as well as continued support for its arcade operations, but of equal importance is the company's decision to license Dreamcast technology to thirdparties, such as Pace, with whom Sega has jointly developed a set-top box incorporating both personal video recorder (PVR) functionality as well as built-in Dreamcast architecture. So



Having seen Sony crush Sega in hardware terms, many believe Sega will now come back and destroy some of Sony's most established software-development allies

although no more Dreamcasts will be manufactured after the end of Sega's financial year in March, the company was quick to reiterate its support for the platform, pointing out that in addition to the Pace deal there are 100 titles set to be released before March next year.

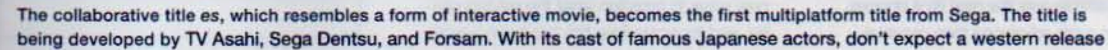
The decision to publish Sega franchises on other consoles comes as little surprise. It was known as long ago as last March that Acclaim has held the right to publish











The collaborative title *es*, which resembles a form of interactive movie, becomes the first multiplatform title from Sega. The title is being developed by TV Asahi, Sega Dentsu, and Forsam. With its cast of famous Japanese actors, don't expect a western release

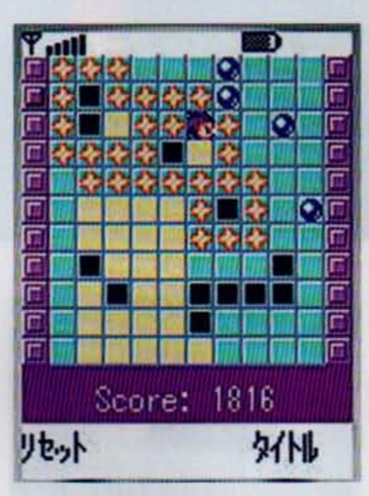






Among the first titles to grace iMode phones will be two games based on *ChuChu Rocket*, a game based on Saturn *NiGHTS*, and *Samba de Amigo*









The Sonic Café suite of games designed for NTT's new iAppli service will initially consist of four games, with more arriving on a month-by-month basis

Crazy Taxi on alternative platforms, for example, and while Sega has only officially announced titles for PlayStation2 and Game Boy Advance, XBox and GameCube development will follow soon. Significantly for the financially beleaguered company, the decision to publish on other platforms – particularly Game Boy Advance and PSone, which will see a number of Saturn conversions – will allow the company to turn its back catalogue into a revenue stream, as well as increasing the addressable market for the company's software. It also has serious implications for other publishers. Indeed, the claim made by EA's John Riccitiello to Reuters that Sega is 'starting from scratch' is disingenuous in a couple of ways. On the one hand it is unlikely that Sega's amusement divisions have not had a chance to investigate PlayStation2 architecture, and it is known that Microsoft has courted them with free dev kits. On the other hand, it disregards Sega's 40-year history developing games.

Away from conventional videogame platforms, Sega is also leveraging its content-development expertise to work with a variety of alternative devices – notably NTT DoCoMo's iMode phones and Palm's personal organisers. The Sonic Café service will be available over the new iApli phones, which are more advanced than previous iMode handsets, and will consist of a number of games that can be played for a monthly charge of ¥300 (£1.80). The first four titles to be available using the service will be a simplified version of the Saturn classic *NiGHTS*, *ChuChu Puzzle* and *ChuChu Edit*, based on the Dreamcast title, and, rather bizarrely, *Samba de Amigo*, which will have new tunes added on a monthly basis. Although no titles have yet been revealed for Palm hardware, the two companies have announced a strategic partnership in which Sega will develop a series of offline and online gaming content.

Sega, Pace, and set-tops

On top of these announcements, Sega's licensing deal with Pace has significant scope to transform the company's fortunes. By dramatically increasing the installed Dreamcast user base, the agreement will, as with PSone and GBA gaming, potentially allow Sega to turn its existing portfolio of Dreamcast titles into an ongoing source of income without the risk of manufacturing or development costs. As Pace's marketing director, **Andrew Wallace**, explains, the deal has been over a year coming to fruition: "We took the decision about a year ago because we're continually looking for new ways to broaden what the set-top can do, and for some time this has been a really obvious way to do it." He goes on to point out that from Pace's point of view the deal makes sense for a number of reasons: "There was a pragmatic reason in that it would be relatively straightforward for us to do, given the architectures we already had. If you look at their console, it is architecturally more similar to a set-top than the others that are around, and it's much closer in price point. The big thing about what we've done is we've made it much, much, cheaper to get access to console quality games because we've integrated the systems. Now, to try and do that with the other consoles is something we'll look at in time, but it's just a lot harder to do than what we've done."

In terms of functionality, the device will boast four joystick ports and be compatible with all existing Dreamcast peripherals. It won't, however, play GD-ROMs. Instead, games will be downloaded and stored locally on the built-in hard drive. Sega will make the entirety of its back catalogue available, with thirdparty publishers expected to follow suit. Wallace anticipates

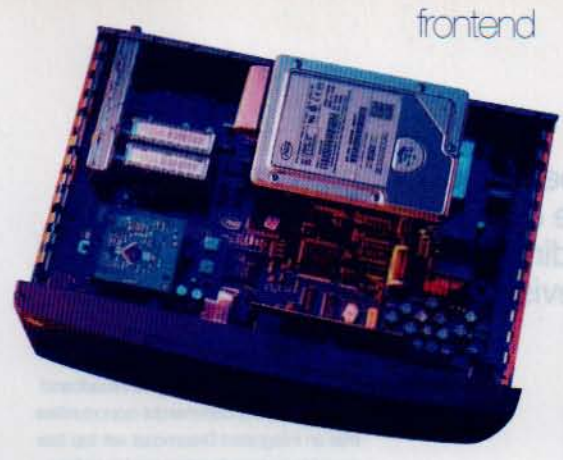
Sega's new line-up

Sega has announced that it will be shipping 30 titles to other consoles by the end of March 2002. So far, the following titles have been confirmed:

Game Boy Advance
Sonic The Hedgehog Advance
Puyo Puyo Advance
Chu Chu Rocket Advance

PSone
Sonic series
Enhanced ports of Saturn titles

PlayStation2
Virtua Fighter 4 (formerly *VFX*)
Space Channel 5 series
Sakura Taisen series
Tsuku (aka *Let's Make A...*) series
Crazy Taxi series





Pace's Andrew Wallace has been on the road showing off the Dreamcast set-top box to investors and journalists

Wallace anticipates that the 40Gb drive will be capable of storing up to 60 games, with each one taking about three minutes to download. Payment schemes have yet to be finalised

that the 40Gb drive will be capable of storing up to 60 games, with each one taking about three minutes to download. It has yet to be finalised what sort of payment schemes will be implemented, though such a distribution method clearly raises the possibility of pay-per-play, or period rental. On top of Dreamcast functionality, the box also incorporates a range of TiVo-style features, such as the ability to pause and rewind live recordings, and with two tuners it is also possible to watch two channels at once, or record one while watching another. "The critical thing," Wallace is keen to stress, "is that the cost of this thing is not significantly more than a straightforward PVR, so essentially the consumer will be getting it for a much lower cost."

While a working prototype is currently being shown to press and investors in the US and the UK, a lot of the finer details will only be resolved when Pace agrees a distribution deal with a service operator. To this end the company is in talks with various cable companies and satellite operators around the world. "What we'll end up doing is concluding a deal with one of these, which will help to define exactly how they want to integrate it into their existing service offering and how they'll price it and stuff like that," explains Wallace. Volume production of the set-top box won't take place until such a deal is in place, which will also determine the manner of distribution. "The way we normally do it is that our set-tops are provided to service providers, and then they pass them on. They may subsidise them or they may just put them out through retail – it varies from country to country."

Wallace is adamant that no matter which operators sign up for the box, the impact on the videogame industry will be considerable: "I think what this will do over a period of years is to compress the market for lower quality games on things like TVs. There'll always be a market for lower quality games on smaller devices, but on TVs we'll find cheaper and cheaper access to console-quality games and as a result the alternatives will seem less attractive."

One of the reasons for this is that the device is aimed very much at the casual gamer. "We're not going for hardcore of fanatical gamers," he continues, "because we think they'll already have a console, though if they happen to want two consoles in the same house for multiplayer gaming, this is definitely a solution. In the UK we think that something like 43 per cent of houses will have an online console by the end of 2003, and the other 57 per cent is our target market. Of course, some proportion of that will never buy games, but there's a lot of anecdotal evidence that a large proportion of the TV user base will play games casually if they're sitting there in front of them and easily accessible."

It might be argued, though, that Sega doesn't make games for casual gamers, but Wallace is convinced that quality will out. "One of our engineers who set this up in New York the other day had never played a console game until two days before, but he was quite happy demonstrating to journalists, playing *Crazy Taxi* and *Sonic 2*. Experience with Open, TPS, Canal Plus, across western Europe, and also NTL and Telewest, suggests that people will use games if they're available on the set top."

Perhaps the biggest advantage that the box will have, though, is the support of influential broadcasters. "One of the reasons that I'm pretty confident that it's going to be successful is that Sky is a very savvy marketing organisation. They've managed to launch a whole bunch of new concepts, and I'm sure that they'll package this up in a way in which people can understand and will buy," notes Wallace. While XBox









Space Channel 5 will be one of the first to test Sega's fortunes in the console space outside of Dreamcast. *Sonic*, meanwhile, will be appearing on GBA and PSone. Further *Crazy Taxis* are expected to arrive on both PlayStation2 and Dreamcast

There have been redundancies at SOE and SOA, and the cost of ceasing DC production is an extraordinary ¥80bn, resulting in a downward revision to loss estimates

evangelists can point to the potential of multiplayer gaming through a broadband connection, the commercial opportunities that an integrated Dreamcast set-top box presents to broadcasters are boundless. "Imagine watching Silverstone," he argues, "and at the end of the race there's an advert on the TV that says 'You've seen the race, now play the game – limited period competition this weekend; fastest ten drivers on *Sega Rally* win a day at Silverstone with Stirling Moss. Three pounds a play, press the red interactive button to see who the fastest players are so far'. There are some really interesting cross-promotional opportunities there which the broadcasters are very excited about."

Be that as it may in the long term, in the short term Sega has understandably been experiencing teething problems as a result of its decision to reposition. There have been redundancies at SOE and SOA, and the cost of ceasing Dreamcast manufacture is an extraordinary ¥80bn, resulting in a downward revision to net loss estimates for the end of this financial year. But the company is unlikely to regret its decision. The surprising thing about the move is that the company took so long to act, and, when it had decided on a course of action, the speed with which it did so. While there may be problems on the horizon, in the shape of set-top box piracy, for example, other signs are positive. Recent endeavours such as the low-cost Independent Developer Toolkit may yet grant some longevity to the Dreamcast, and the possibility of the company manufacturing an arcade board based on the architecture of another console will maintain the smooth transition from coin-op to console that the company's franchises enjoy. With thirdparty development set to give Sega a profitable core business around which it can base forays into more experimental hardware, the news can only be good for Sega – which is expected by analysts to return to profitability within two years – and slightly less so for the competition.





While western gamers might be slightly nonplussed by the prospect of the *Tsuku* (or *Let's Make A...*) series of sports titles on alternative platforms, the franchise is hugely popular in Japan, and for the series to appear on Sony's PlayStation2 shows the significance of Sega's move

industryopinion

Edge invites thoughts on a new Sega

"Anyone growing up wasting their pocket money on *Space Harrier* and *OutRun* would have nothing but admiration for Sega as a software company. I still love the eightplayer *Daytona* in the arcades. We're glad to have them on board, although a little scared by the quality of the competition they'll provide. It will definitely raise the standard of PS2 games even further. I have a very simplistic view about platforms. Sony have always had the most open platform and have consequently made more developers rich. Sega and Nintendo have tended to make platforms solely for their own benefit, basically to show off their own games. I think Sega changed this a little with the Dreamcast, but it was too late and thirdparties weren't convinced. I can't see any evidence that this is changing for GameCube. Microsoft has no heritage in console or arcade games, and so has had to vigorously try and embrace developers. Unfortunately, any developer wishing to make some money out of XBox has to wait for at least another year, which is a long time in this business."

Brendan McNamara
SCEE

"Sega's decision to reconsider its role within the game console hardware business comes as no surprise. Weakened both financially, but, more importantly, in the eyes of the games market by the failure of Saturn, 32X, and Mega CD, Sega launched Dreamcast with few expecting it to seriously challenge its principal rival Sony in the longer run. With little serious support from publishers as a result, the self-fulfilling prophecy of its demise as a retail product was more or less complete before it started. Sega has now finally realised that its image as a hardware manufacturer is too tarnished for it to play any further role in a retail market made even more crowded by Microsoft's arrival.

This, though, does not necessarily spell the end for Dreamcast. By tying up with PACE Micro, Sega has paved the way for longevity and an addressable market for Dreamcast that it could not have achieved at retail. Should one of PACE's many partners place an order for, say, six million Dreamcast-compatible set-top boxes, not only would the Dreamcast market double overnight, but such set-top box installations would likely stay in homes for longer than the retail product would.

Most importantly, however, such a move will introduce broadband to the console, and with it the dream of publishers and console manufacturers everywhere: seamless electronic distribution and high-speed multiplayer interactivity.

The early pain it will experience exiting this market will be mitigated by its ability to concentrate on its true asset base: its software. For the first time it will be able to exploit the far broader addressable markets offered by the aggregate of its former competitors' markets, and indeed by a Dreamcast market which could expand considerably should PACE secure a high volume of set-top box orders.

With more than 100 titles in development and a huge number of highly successful games franchises, Sega is now poised to become one of the largest independent games publishers in the world."

Nick Gibson
Durlacher

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"Sega giving up hardware and making software is something that's been bantered around the industry for some time, but no one expected it to happen so quickly. I think it's a great move that ensures the survival of what is, and what always has been, a great games company. They tried valiantly to make it work, but the hardware side of things was obviously holding their business back. *Virtua Fighter 4* becomes another 'killer app' for PS2, alongside *GT3* and *MGS2*. I was expecting this sort of shock news to come from XBox, but I expect they will shock us this year somehow anyway. Great Sega titles coming to PS2 and GBA is just fantastic news. I just hope they announce powered-up versions of *Virtua Tennis* and *Sega Rally* real soon."
Alex Ward
Criterion

"First of all, I just have to say 'I told you so' and quote myself from **Edge** 72: 'It seems like the Dreamcast has probably failed already... it might take a couple of years before the public realise'. Having said that, though, I've been continually surprised by the quality of software on Dreamcast over the past couple of years – it is clearly a capable machine (maybe more capable than people originally realised), and it's a shame that it appears to be the last console that Sega will manufacture.

I'm glad to see that Sega intend to continue developing software – they have always produced above-average software in the past and the fact that it will now be cross-platform can't be a bad thing. I just hope they don't get tied up in any exclusivity deals."
Steve Ellis
Free Radical Design

"I think it's great news for the rest of the gaming industry. Sega's internal teams have produced some of the most playable and innovative stuff on the planet. From Sega's view it removes a lot of investment and risk in hardware research and development. Hopefully they'll be spending it on their game teams instead."
Mike Kavallierou
Microsoft

"Sega have done this sort of thing before, so everyone should know what to expect. When the Saturn was fading, they shifted focus away from it, forming SegaSoft to develop games for PC and other platforms. They still came back with a new console a few years later, so I wouldn't write them off completely. Sega have the console bug, and I wouldn't be at all surprised if they have some new, cool console waiting in the wings. The Dreamcast is a good console, though, and it is a shame to see it go. I suspect there is still some life in it for a good while yet.

For developers this is a double-edged sword. It removes one platform that we have to support, but it also removes the opportunity that brings. It is a shame because programmers have only just started learning to get the best out of Dreamcast.

The deal Sega have signed will probably see the Dreamcast pop up in loads of different places. Perhaps they'll get millions of Dreamcasts out there by stealth."
Chris Kingsley
Rebellion

"I think it is an excellent decision and should herald a renaissance in the company's fortunes. Sega are an awesome game development organisation, but have never had the financial muscle of Sony, Microsoft, or even Nintendo. They can now be a giant in game development instead of a minnow in consumer electronics. It is only a shame that they were forced into the decision by their current circumstances instead of making it as a positive and daring strategic decision several years ago, as I urged them to do. The implications for game developers is that the stakes have just been raised again, and only the very biggest and best will be able to compete."
Karl Jeffery
Climax

"With the demise of Sega as a console manufacturer, we are effectively losing a company that did not succeed in marketing what was in essence a good piece of hardware. Whether that was due to limited financial resources or a lack of good organisation, creativity, and vision is difficult to judge, but I think it's safe to say it wasn't just bad luck or clever PS2 hype.

No need to mourn the industry's loss of Sega in this respect, therefore, since the consequence of all this is that economic inefficiencies are killed and we are left with the best parts of Sega (its many software divisions), which clearly cannot be held responsible for Dreamcast's poor performance. Being some of the best game developers in the world, these can now target an installed user base which is going to be four or five times the size of their previous 'audience', which basically means it's a win-win situation for almost everyone involved. Sony, Nintendo, and quite possibly Microsoft will now see their software line-up being strengthened by top-quality Sega franchises – and hopefully maracas – which is good for consumers and the struggling industry alike. Shareholders will undoubtedly witness Sega's revival on the stockmarket, and developers don't have to worry about the Dreamcast any more (if there were still ones that did), instead being able to focus on the three strong players that remain."
Martin de Ronde
Lost Boys Games

"Sega's outstanding reputation for creating great arcade/home entertainment game software is renowned and we welcome them to the PlayStation platform. It is great to have the power of this new content as part of the PlayStation experience, which expands the choice for users as well as potentially attracting new audiences."
David Wilson
SCEE

"At EA, we welcome Sega's decision to focus on game software. Sega has some extremely talented people in its studios producing some of the best games and characters in the industry. We think their focus on software and development for other platforms will be good for gamers and for the industry.

As for competition, we welcome the challenge. Other companies such as Disney, Microsoft, and Sony have made threats in the past and yet EA Sports commands the leading market share across PlayStation, PlayStation2, and the PC. A challenge from a good competitor only makes us work harder."
Paul Jackson
Electronic Arts

Coin-ops struggle on at ATEI

As was expected, Sega and Konami shine with new technology, but delegates at the Earls Court arcade expo find little to surprise or inspire

Like JAMMA before it, the Amusement Trades Exhibition International, which took place from February 23-25 at London's Earls Court, bore witness to coin-op manufacturers' attempts to distinguish the arcade experience from home gaming in an attempt to combat challenging market conditions. With several titles receiving their European premieres, and one or two their world debuts, the Sega and Konami booths stood out in terms of quality. Worryingly, though, away from these two, there was little that was either genuinely new or overwhelmingly original, suggesting that the coming year will pose some difficult questions for arcade operators.

There was little that was either genuinely new or overwhelmingly original, suggesting the coming year will pose some difficult questions



Fourplayer *Arctic Thunder*, with its custom-designed cabinet, provides one good reason to venture to the arcade

Sega still strong

With the exhibition taking place before the company had made any official announcement regarding its decision to refocus, Sega's bustling stand gave little indication of the news that was about to break. Indeed it is unlikely that the company's undisputed strength in the coin-op sector will be diminished by any repositioning, and its stand at ATEI reinforced the fact that the company can be counted on for originality. While it was pitching the Naomi GD-ROM system to buyers as a more cost-effective means of distributing games, a rolling technical demo highlighting the capabilities of the Naomi 2 board was more prominent, with two titles on show featuring the new hardware. Four *Club Kart* cabinets were linked up, while *Wild Riders* was given its world debut. Although the latter was eagerly anticipated, it didn't appear to have the replayability of *Crazy Taxi*, and the cabinet design didn't help, its handlebars having little travel. Also hugely popular was *Air Trix*, which featured a custom-designed cabinet incorporating a skateboard, which was shown alongside *Strike Fighter*, *F355 Challenge 2*, and *Sports Jam*, which made use of a *Track & Field*-style dynamic. Perhaps the least inspiring title, despite its popularity, was *Confidential Mission*, which was one of a raft of lightgun games that added little to the genre





Sega's rolling Naomi 2 footage took pride of place on its stand. Visuals did not disappoint

Namco disappointing

Namco was as guilty as any of a lightgun fixation, with *Ninja Assault* and *Crisis Zone* on prominent display, and the underwhelming *Vampire Nights* receiving its world debut. Although all of these titles were entertaining enough, they did little to encourage confidence given the current climate of the arcade market, and with *Ridge Racer V* indistinguishable from the disappointing PlayStation2 incarnation, it is a bit much to expect the *Ms Pac-Man/Galaga* retrospective cabinets to carry the company's fortunes. Also on display on the company's stand



Club Kart, running on Naomi 2 hardware, can be personalised using a form of memory card to store performance details

was MTV's *Drumscape*. Eschewing the immediacy associated with the coin-op ethos, *Drumscape* consisted of an enclosed set of drum pads, and seemed to appeal only to those capable of actually playing the drums, which would appear to limit the attraction for the majority of gamers.

Konami shows promise

So it was left to Konami to actually invigorate the lightgun ethic with arcade-specific hardware. *Police 24/7*, with its motion-detector cabinet and aerobic gameplay principles, is a laudable undertaking, and may yet wow arcade goers







Namco's *Vampire Nights* received its world debut, but was relatively uninspiring, as was the arcade conversion of *Ridge Racer V*, which is pretty much identical to the disappointing PlayStation2 version. There was little else that inspired confidence on the company's stand







Air Trix (top) and its skateboard cabinet was hugely popular, as was *Wild Riders* (above), which failed to live up to hype

in the same way as the company's BeMani titles (of which *Dancing Stage EuroMix* and *Para Para Paradise* were on display) but the title doesn't quite gel at present.

Coin-op trends emerge

But in many ways, Konami was typical of two trends that were noticeable on the showfloor. The company's promotion of its Internet Challenge, for example, which enables gamers to enter high scores into a competition by means of a password, was indicative of one way in which operators are hoping to overcome a shifting market. Indeed, a host of companies were attempting to entice custom with the offer of tournaments and prizes, as Midway's vice president of sales, **Mark Struhs**, points out: "I think this show represents the change that is occurring within the industry. We saw a lot of tournament and prize machines. All the manufacturers are trying to develop something new for the players and the operators are willing to try it as well." But the other, and more obvious trend, was the attempt to create an experience in the arcade that simply can't be replicated in the home. *Fighting Mania* (already in some UK arcades) may have the moral majority up in arms with lines like 'You're already dead' taken from 'Fist Of The North Star', but it seems unlikely that any peripheral will be introduced for home consoles that will support its hyperactive punching gameplay.

One of the companies that perhaps took this to the extreme was Cybermind, which demonstrated a host of virtual-reality-style game cabinets alongside *Ben Hur 2000* – previously displayed at ECTS. The problem with the company's strategy, though, is that the software doesn't match the hardware. *Killer Loop*, for example, was hardly the best illustration of the potential of a hydraulic cabinet, and while *Heavy Gear II* and *Sin* may be enhanced through the use of a VR headset, they have both been available to PC owners for some time now.

The best demonstration of effective cabinet architecture was Midway's *Arctic Thunder*. "While many of our distributors are familiar with this game and its unique features," explained Struhs, "*Arctic Thunder* has just started to ship internationally. ATEI provided the international marketplace the opportunity to experience the game and appreciate what it has to offer." Although the title will put in an appearance on PS2, there's no chance that any console version will distil the essence of its coin-op appeal, which resides in the vibrating seat and jets of air that combine to enhance a sense of speed, and the fourplayer link-up.

But with the rest of Midway's offering consisting either of older titles or rehashes of its existing portfolio, including the already-available *Cruis'n Exotica*, and the best of the rest confined to the likes of Gaelco's weak *Smashing Drive NYC*, the coming year promises to be a tough one. With one insider predicting that difficult market conditions will take their toll even on the likes of Konami, the future may look bleak in some ways, but the ingenuity on display in the handful of standout titles bodes well.



As expected, the most experimental stand was Konami's, which allowed attendees to sample a 50%-complete *Thrill Drive 2*

Big guns join the iMode revolution

With 20 million users, iMode is already thriving in Japan, but the release of improved handset technology has attracted gaming's big names to the format



NTT's new range of handsets boast a colour screen and greater resolution than early handsets, affording more freedom to game developers

Sega's decision to enter the mobile gaming sector with its Sonic Café suite of games comes as no surprise given the huge success of NTT DoCoMo's iMode phones in Japan. With nearly 20 million users, the format has presented significant competition to videogame publishers vying for the nation's leisure hours.

But with the release of NTT DoCoMo's new i503 handsets, which are compatible with a variant of Java and have a much wider functionality, several big-name publishers have announced support for the platform, including Sony, which has entered into an agreement to develop technology to link iMode phones to the PlayStation.

Improved handset specs

The new Java handsets add an improved colour screen with higher resolution to a broad range of existing functions, including email and MP3 playback. Although Capcom and Jaleco have already made a name for themselves producing iMode content, these improved specifications have also attracted the likes of Namco, Konami, Taito, and even Disney, which will join them in developing mobile content. The new titles will be accessed from NTT's new iAppli service, which will be rolled out to accompany the launch of the new platform, and which allows cache applets on the handsets. Sony, meanwhile, has come to an agreement with NTT and its six overseas partners – including AT&T Wireless in the US and KPN Mobile and Telecom Italia Mobile in Europe – to develop an interface to connect iMode handsets to home consoles. The move follows the announcement last year of an iMode adapter for the redesigned PSone. In a separate agreement, the two companies have entered into a partnership to trial the streaming of rich media, paving the way for Sony's broadband strategy.

Outstripping WAP

While the stampede of developers might reasonably be compared to the WAP land grab that is taking place in Europe, the technological sophistication of iMode phones is, for the time being, in advance of what can be achieved with WAP handsets. Graphically the titles that are emerging are similar to 8bit consoles, though without multiple plane scrolling – in stark contrast to the static greyscale images that anybody who has dabbled with the current incarnation of WAP gaming will be familiar with. Although the titles announced for NTT's new service may not be as refined as 32bit gaming on Nintendo's Game Boy Advance, the size of the user base and the fervour with which iMode has captured the imagination of the Japanese are likely to continue to present a challenge for traditional videogame platforms – both console and handheld. As in Europe, though,

The new Java handsets add an improved colour screen with higher resolution to a broad range of existing functions

Titles on their way to iMode



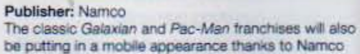


Publisher: Taito
Among the titles that Taito will be bringing to iMode phones are *Puzzle Bobble* and *Space Invaders*



Publisher: Konami
As well as bringing the ancient *Pooyan* back to life, Konami has created a new version of its SD baseball





Publisher: Namco
The classic *Galaxian* and *Pac-Man* franchises will also be putting in a mobile appearance thanks to Namco



Sony has cemented a deal with NTT DoCoMo after announcing iMode compatibility last year



The phenomenal appeal of iMode phones in Japan is causing a headache for more traditional videogame and arcade game developers

Jobs lost

As **Edge** went to press, news had just arrived that several videogame companies have been forced to implement redundancies. Despite strong official sales figures for game software, the transition to next-gen hardware apparently continues to present a challenge for publishers and retailers alike. Online retailer Gameplay will be cutting 275 jobs, resulting in 54 departures from the company's London-based head office and the closure of the company's eight @Jakarta high street stores. There is bad news also for Codemasters, which has announced 90 redundancies, due to difficult market conditions according to a press release. Expect some more in-depth analysis soon

Jobs found

The recruitment section of **Edge-Online** is now live, and is the ideal place for would-be coders, artists and designers to start looking for a first job, or for seasoned industry veterans to plan their next move. In addition to regularly updated listings of the most desirable jobs, the section contains a searchable database containing company profiles to help applicants secure that coveted role. The section complements the existing features, first impressions, and forum that can be also be found on the Web site, which is located at www.edge-online.com.

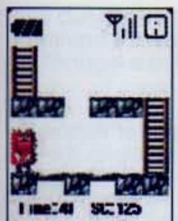
Graphically the titles that are emerging are similar to 8bit consoles, though without multiple plane scrolling

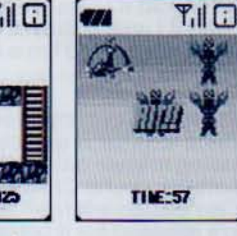
it has yet to be determined what sort of revenue models can be sustained, and with the number of publishers jumping on board it will be interesting to see how much competition the market can support.

The west must wait

Although western gamers may be eager to get their hands on some of the titles shown on these pages, it will be some time before they will be able to do so – unless they move to Japan or take up residence in Holland or Italy. While NTT has plans to introduce iMode technology to the US and Europe in the coming year, the move is unlikely to spell the end of WAP, since as a proprietary technology it will only be supported by KPN in Holland and TIM in Italy – and so, obviously, only available to users in those countries.

However, with the forthcoming advent of GPRS, standards of WAP games could soon match their iMode counterparts, so western developers could do well to watch and learn from the lessons those working with iMode can teach them.





Publisher: Panasonic
Given the strength of some of the other franchises set to appear, *Pigumon* and *Balutan* aren't too inspiring





Publisher: Dwango
Better known for fishing games, Dwango is turning its attention to samurai and card games for iAppli



Publisher: Hudson
Miracle Quest is one of a raft of Hudson titles



Publisher: Fujitsu
Fujitsu's *Karate* looks like *International Karate*



Publisher: Cybird
Logic puzzles on the go courtesy of *Cybird*

Publisher: Disney
Several Disney icons will appear on iMode screens

OUT THERE
REPORTAGE



Bowling and football without any of those nasty bits like fresh air and physical exertion, courtesy of ATEI

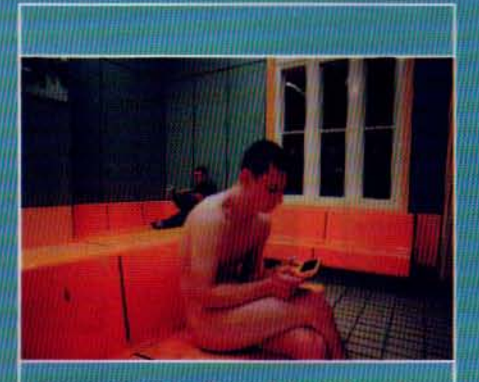




A bull wrangler puts his shoulder into it before **Edge** gets the opportunity to shut down the entire stand







Second-prize winner Thomas Butler (left), and GB snaps. View more at www.gameboygallery.com

01 Taking coin-ops by the horns

UK: With coin-op manufacturers at ATEI attempting to outdo each other in terms of extravagant cabinets and concepts, it's difficult to pick out just one or two, but both *Hyperbowl* and Konami's *Kick & Kick* scored highly. The former combined the best aspects of crazy golf and bowling, while the latter consisted of, well, kicking a football. However, *Rodeo Fever*, which saw prospective cowboys wrestling a cyber bull to the ground, got **Edge**'s vote, if only because its correspondent achieved the day's fastest time – and in doing so fused the entire stand.

02 Colour (or b&w) Game Boy

UK: Nintendo continues to fuel Game Boy sales with its innovative publicity campaigns. Photography students from around the country were asked to choose one of the Game Boy Colors and create an image to communicate its mood. A £2,500 first prize ensured many a bizarre entry, and yet more column inches to a format which hardly needs a new lease of life. The finalists' work was… interesting. Expect Nintendo's PR, Cake Media, to come up with even more inventive methods of grabbing your attention come the Game Boy Advance launch this June.

Soundbytes

"I once tried to get a job in a fish-gutting factory – but I applied at the wrong time of year"

Matthew Smith reveals his fishy past to 'Thumb Candy'

"It's not quite as though this is General Motors saying we'll make BMWs, but it's the same kind of proposition. They may look like BMWs, but I doubt if they'll drive like BMWs"

EA's **John Riccitiello** makes it obvious that he doesn't relish competing with Sega

"Quite how having 40 years of electronic entertainment experience amounts to 'starting from scratch' escapes us, but at least it shows the notorious arrogance of EA"

Anonymous Sega employee responds to Riccitiello's comments

"Five years after I did it I was a washout; ten years after I did it I was history. It's coming up to 20 years now… and I'm a legend"

Matthew Smith again, considering the after-effects of *Manic Miner*

"We won't be able to get any user support if we continue to release games on the brink of missing release dates. Our major goals are centred around Christmas 2002, but the GameCube will fail if nothing interesting's released for it before then"

Nintendo president **Hiroshi Yamauchi** articulating an apparently newfound appreciation of delivering things on time

03 Ryo for real

UK: What began as a casual observation upon meeting one of its readers eventually compelled **Edge** to snap him for inclusion in Out There. The reason? His resemblance to a certain *Shenmue* character, complete with full-on eyebrows and '80s-style barnet. If Sega needs his services to promote the sequel, just call **Edge**.

04 Two-bit 8bit gaming

UK: The Super TV Boy III's cheap plastic appearance belies a wealth of gameplay talent. Although dross exists among the 127 retro games the all-in-one unit offers, *Donkey Kong*, *Frogger*, and *Pitfall* make up for the more risible offerings. Copyright sensitivities have resulted in the games receiving something of a makeover (with name changes and some re-colouring) but this only enhances the amusement. Discovering that *Robot Strike* is, in fact, *The Empire Strikes Back* in disguise is half the fun. £30 buys you this slice of 8bit heaven from www.firebox.com.

05 A lead FPS

US: The genesis of another PC FPS might not usually warrant an appearance in Out There, but *Pencil Whipped* is different. Coming from the warped imagination of one Lonnie Flickinger, an independent game designer with a taste for the weird, *Pencil Whipped*'s world is one of black-and-white clawing sketches of lunacy, and hollow, echoing sound effects. Fans of American McGee's sterile take on madness would do well to take a look at www.maxminn.com/chiselhead/pw.html and get downloading.

06 Perfectly structured

UK: Developed by Alex Austin, *Bridge Builder* is an electronic version of those science lessons spent trying to span school desks with nothing more than three sheets of A4, some sticky tape, and a couple of paper clips. Although your bridge designs begin with minamalist economy, they will eventually need to blossom into engineering triumphs across some of the more challenging chasms. At only 122K this addictive game can be downloaded from the **Edge** Web site at www.edge-online.com.

Data Stream

New Dreamcast price in US: **$99 (£70)**
New Dreamcast price in Japan: **¥9,900 (£60)**
Personal donation from Sega chairman Isao Okawa to Sega in order to stabilise finances: **¥85bn (£502m)**
Sega's original estimated sales for the year ending March 31 2001: **¥320bn (£1.9bn)**
Sega's revised estimated sales for the same period: **¥260bn (£1.54bn)**
Sega's original estimated net loss for the year ending March 31 2001: **¥23.6bn (£140m)**
Sega's new estimated net loss for the same period: **¥53.8bn (£318m)**
Global excess Dreamcast inventory: **2,030,000**
Total US videogame sales, 2000: **$6.5bn (£4.5bn)**
Total US videogame sales, 1999: **$6.9bn (£4.8bn)**
US videogame unit sales, 2000: **91.4m**
US videogame unit sales, 1999: **188.6m**
Second most popular console game in Japan over the year 2000, with 651,424 units sold: ***Super Robot Taisen Alpha***

03



Shenmue's Ryo delivers one of his infamous stares



An **Edge** reader does a videogame Alistair McGowan

04





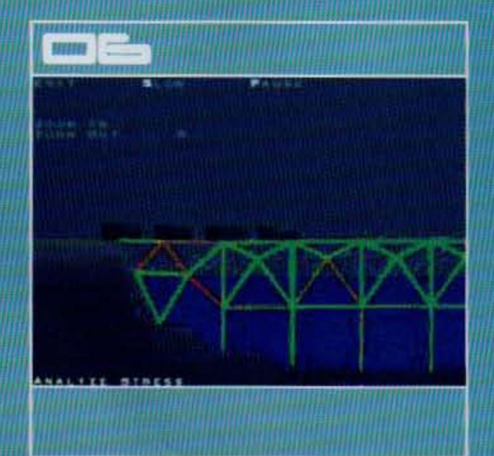
Activision's *Pitfall* (above) is renamed *Forest Walk*, and gets a colour alteration via the Super TV Boy III

05



American McGee beware: *Pencil Whipped*'s engine may be primitive, but it's a lot scarier than *Alice*

06





Bridge Builder's later levels are particularly tough, and require both experimentation and patience



Steve Russell's *Space War* code came free with every Digital PDP-1 computer. Cheap at $120,000



Back in '78, 'Disco Invaders' was the dance floor craze of choice among Tokyo's hippest clubbers



Al Alcorn was only too pleased to show off his baby. Most decline the invite to check out his garage *Pong*



Tomohiro Nishikado demonstrates the legendary 'Nagoya' method. And then promptly loses to Lee



Matt Smith never wanted fame to go to his head. Presumably this was to leave room for other things



The Logitech competitor comes off worst in Kārna's very own version of 'Robot Wars'



Two devices to make it into the office this month prove that not every freebie is a freebie worth having

07 'Thumb Candy': sweet

UK: Back in issue 90 **Edge** reported that 'Thumb Candy: A Brief History Of Videogames', was to be broadcast on Channel 4 at the end of October. It disappeared without a trace, only to resurface on niche digital channel E4 this February. Why this happened remains a mystery, because the programme set a new paradigm for videogame coverage on television. Thanks to exhaustive research it contained interviews with many of the founding fathers of the industry, and delivered sublime nuggets of information in an accessible way. Even presenter Iain Lee shouting: "You're rubbish!" after beating *Space Invaders* creator Tomohiro Nishikado at his own game didn't really grate.

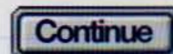
Standout moments included Al Alcorn removing the back from his original *Pong* machine to reveal its sophisticated innards: a TV set and bread tin to catch the quarters. Matthew Smith (of *Manic Miner* fame) also made a rare appearance and invited the film crew into his bedroom. Seventeen years out of the limelight had clearly made the elusive Speccy coder a bit giddy – or perhaps his eccentric behaviour was a result of spending too much time in Holland. Don't miss the repeat on E4 on March 17.

08 Mouse burns up competition

UK: PC gamers may want to look away now – unless they have £70 to spare. The sublimely designed Razer mouse comes packaged in a silver tin, complete with 'celebrity' endorsements from 'professional cyber-athletes'. Just to prove how superhard the peripheral is, Razer sent a scorched, warped Logitech mouse through the post to herald the launch of its new product. **Edge** eagerly awaits the next round in the controlling device wars.

09 The fall of the freebie

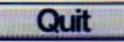
UK: Not all the freebies that arrive at the **Edge** office require lenghty product testing (a pair of purple Y-fronts from a long-forgotten publicity drive have still failed to find a taker among the team). This month's rejects include the PSA Parts Off-Table Ring Mouse (which is as useless as it sounds) and Konami's *Shadow Of Memories* compass – a device which, while serviceable, does little to dispel the view that its plot is completely impenetrable.



Treasure
What's not to love about the creator of Dreamcast *Bangai-O*?

Talkback Productions
'Thumb Candy' producer proves that TV land *can* handle videogames

Bedroom coding
Jeff Minter's work shows that seclusion can still foster greatness



The pitiful state of PC gaming
Can *Black & White* really turn it around? Answer next month

Publishers slamming Sony for letting them down
This is *after* jumping aboard what they perceived as a cash cow

The second, clumsy wave of Arnie call hoaxes
"I'm a police officer, you idiot!" lost its lustre in an instant



10 Crypto

How private are your emails from prying eyes? In 1969 James Ellis, a cryptographer working for the UK's top-secret General Communications Headquarters (GCHQ), devised a system for encoding messages that has now become the de facto standard of ecommerce, and underpins the security and privacy of almost all digital communication. Ellis invented public-key encryption, a way for individuals to communicate privately (immune to eavesdroppers) without having to pre-arrange a secret key to unlock their encoded messages.

Unfortunately, his superiors at GCHQ weren't convinced of its safety and decided to shelve the project, in so doing relegating Ellis's part in this book, a contemporary history of cryptography, to a mere appendix.

Instead, 'Crypto' is an American-centric tome that tells the tale of how a few paranoid radicals, mathematics geniuses, and visionary technocrats reinvented this ingeniously simple to use, yet devilishly difficult to break, system for keeping messages secret.

Levy writes with breathtaking pace, drawing together the best elements of a political thriller, first-hand documentary and popular science, and whips them into a veritable feast for the mind.

His protagonists are the singleminded, bold, and foolhardy academics and businessmen who took on the American equivalent to GCHQ, the Kafka-esque National Security Agency, and forced them to accept a new era in cryptography. To wit, military-strength encryption is now available to all.

An epic account of how a disparate group of modern-day brainiac radicals fought one of the most powerful institutions in the world and – it would seem – won.

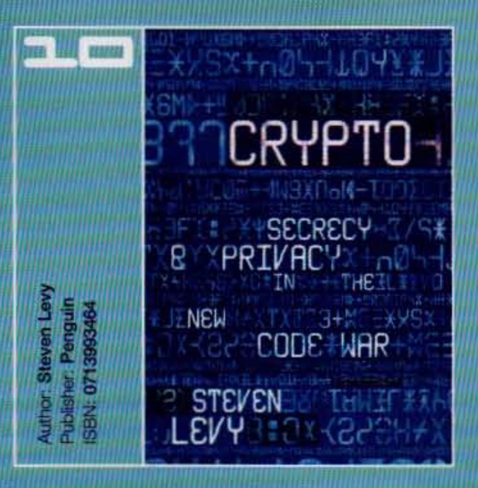
11 Rebel Code

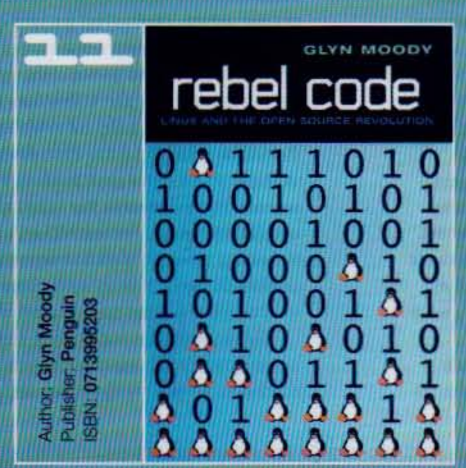
Indrema, the new open-source console, will have a hard time surviving the imminent console wars between Microsoft, Nintendo, and Sony. But if its creators can be at all justified for this bold move to break with game-development tradition, then it is in the unmitigated success of *Linux* – the open-source operating system that's caught giants like Microsoft completely off guard and rests at the heart of Indrema.

In 1991 Linus Torvalds, then 21 years old, began creating Linux in his spare time to make one of the most successful operating systems of his day, UNIX, available on a PC. He pasted his half-baked code on the Web and encouraged others to help with the project. Thousands of eager programmers jumped to his aid, and very quickly a development community sprang up – marshalled by the 'benevolent dictator' Torvalds – to further develop *Linux* as a free, home-grown alternative OS which now rivals *Windows 2000* in the server market.

In 'Rebel Code' Moody chronicles the history of *Linux* and delves into the minutiae of the open-source movement, its successes, and its failures. Though open source is an invaluable way to turn a good idea into a working product for the technically savvy, it also has its limitations in that – as Moody shows – to get into the mainstream, business must get involved.

Aspiring Indrema developers and open-source monkeys should read this book as both an inspiration and a warning of what open source is, and is not, capable of.







Site: **The Electric Playground**
URL: **www.elecplay.com**

12 Web site of the month

Just as 'Thumb Candy' goes some way towards making up for the legacy of crappy videogame-related TV programming in this country, American company Elecplay.com Productions continues to serve US viewers with a surprisingly palatable televisual package in the form of 'EPTV'. Unavailable to viewers this side of the Atlantic, the company has come up with a solution via its Web site, which allows users to consume the show in QuickTime format. Yes, the window's small, and presenter Tommy Tallarico slips into Californian-dude mode too often for comfort, but 'EPTV' shows reams of game footage, speaks to creatives behind the scenes, and has a budget that'd make 'Bits' blush.



13 Advertainment

Japan: It's not often games centred on the activity of cooking features within these pages, but if there's any place suited to showcasing them (or at least their TV ads), it's Advertainment.

01. Voiceover: "It's the last party of the century"
02. "This is a game based on cuisine"
03. "Yes, and it is a totally new boardgame"
04. "*Tenku no Restaurant*"
05. "Let's try it, my friends"
06. "Media Factory!"

From this attendee's perspective, 2001's ATEI was an unusual beast to get your head around. ATEIs past have always thrown up moments of note (a non-badge holder being beaten into submission by security staff despite his drunken protestations being one especially unsavoury example), but this year things came into sharp focus: this is not the place for a traditional videogame journo on the lookout for content worth writing about.

To coin a cliché, RedEye's encounters with various coin-op company representatives ranged from the sublime ("Oh, you're not from an industry trade mag? What, and you want to write about this in a consumer publication? Okay! What do you want to see? Who do you want to talk to? Can I get you anything to drink?") to the ridiculous ("I'm sorry, what is it you want? Well, maybe if you leave your business card I can get someone to get in touch with you after the event…"). If you weren't a grizzled coin-op industry veteran, it seemed, then you may as well have been invisible.



REDEYE

Commentary from inside the videogame industry

Fear and loathing in Earls Court

Acquiring press materials may have been a challenge in itself, but sampling the various new arcade titles on offer also proved a tiresome endeavour. Perhaps the busiest attraction at ATEI was Sega's Naomi 2-powered *Club Kart*, which was presented in an arrangement of four linked cabinets. Within ten minutes of RedEye spotting the units, one of them decided to give up the ghost, much to the bewilderment of a succession of Sega engineers, who proceeded to open a service panel and poke around inside, to no avail. Which left RedEye's chances of getting to play *Club Kart* diminished by 25 per cent. After 45 minutes of hanging around, witnessing suit after suit wedging their over-ample frames into the coin-op's diminutive bucket seats, it was time to give up and move on. Maybe things would quieten down later in the day.

Every coin-op in the vast Earl's Court exhibition hall was on freeplay, which was the source of the problem, because when consumers are offered something for free, they just can't get enough of it (legend tells of the guy who, with his one last wish, decided that it would be to have an infinite number of extra wishes). RedEye had got wind of Midway's *Arctic Thunder* by this point, hearing that it was one of the more impressive games of the show, but, alas, found it teeming with guys in their early 40s behaving like spoilt children on a day out to McDonald's (but then some would argue that that's the beauty of videogames – they are great levellers). RedEye stood and watched as the same four individuals played nine games in a row. Perhaps Midway's seat vibration technology served to somehow ease the players' prostate problems. It remained a mystery. It also meant another wasted three quarters of an hour.

By this time it was one o' clock, and a sustenance mission was clearly in order. Earls Court is home to a Pret A Manger outlet, and a roast beef sandwich looked a fair bet. The price of these slightly sad-looking savoury comestibles somehow summed up just how tiresome ATEI could be. The cost of two slices of bread, a couple of slices of beef, plus what appeared to be a smattering of horseradish sauce? £3.16. Actually, the expense isn't the issue, it's the exact amount – that 16p on the end. Presumably this change-unfriendly price tag is to further the sandwich chain's reputation as a company that does things a little differently, organically, and generally more, well, just different. In the sweaty hubbub of Earl's Court it wasn't so much different as just another pain in the rump.

Acquiring press materials may have been a challenge in itself, but sampling the various new arcade titles also proved tiresome

Clearly, it was time to venture away from the glitzier stands on offer from the likes of Konami and into the periphery of ATEI, where smaller hardware vendors were plying their trades. Among the pool-table manufacturers and coin-slot mechanism engineering companies, a selection of much more modest e-entertainment endeavours could be found. It wasn't long before RedEye was indulging in a spot of *Simpsons Bowling* (you line up Homer, Krusty or whomever, then let your ball fly by spinning a trackball – surprisingly fun), *Big Buck Hunter* (a ludicrously tricky deer-shooting lightgun affair replete with pump-action shotgun), and *Turkey Hunting USA* (more lightgun action which pretty much does what it says on the tin). No queues existed around these coin-ops, which was welcome respite.

Among other attractions, RedEye tracked down an unusual 'Photo-Me'-style booth which allowed users to have their photos taken, the results of which were printed out in the form of a London postcard with your mug resplendent in the top corner. And let's be honest, what trip to ATEI is complete without a postcard bearing an image of your own face? Just as RedEye prepared to step into the booth, however, two Italian delegates bundled their own way in. Now, the process of having your photo taken using this ingenious coin-op should take around four to five minutes. With these two particularly vain stallions, however, the process took at least twice that thanks to them not being happy with the preview shots onscreen, cancelling them, and then re-posing and re-posing until the perfect image was arrived upon. RedEye's legendary patience began to crack.

It was not a good day for snacking. Nor for fostering Euro relations. Most importantly, though, even at 5pm, the *Club Kart* machines were still clogged. RedEye will be staying at home next year.

RedEye is a veteran videogame journalist. His views do not necessarily coincide with ***Edge's***



TRIGGER HAPPY

Steven Poole

Controls: getting it right from the ground up

There is one design aspect above all others that can sink an otherwise excellent videogame. The graphics can be astonishing, the architecture beautiful, the AI fearsome – but if the player is forced to negotiate a bad control system, all that is next to worthless.

Control systems – or HCIs (human-computer interfaces) – can be bad in two major ways: they can be simply clunky, or actually illogical. *Shenmue*'s manages to be both at once. Character movement is assigned to the D-pad in the 'rotate/walk forward' paradigm familiar from *Tomb Raider*, *Resident Evil* et al. This is an elderly system that the N64's analogue stick was supposed to consign to history. Four years on, to relegate the Dreamcast's analogue stick to the secondary function of 'look' is nuts.

But *Shenmue*'s control system is actually illogical as well. There is a good reason for the rotate/walk system in the early *Tomb Raider* games, which is that success depends critically on very precise positioning and jumping. Later sequels introduced analogue movement with the Dual Shock pad, but the D-pad was still regularly needed. Yet no such acrobatic negotiation of 3D spaces is required in *Shenmue*, so there's simply no excuse.

Another way in which control systems can be illogical is in a structural mismatch of physical action to virtual action. In the Dreamcast port of *Quake III Arena*, for instance, it makes sense to assign looking and turning to the analogue stick, because manipulating a joystick is a good structural analogy to moving your head around in the virtual space. But you're then required to use buttons to run and strafe, which is a bad method of controlling human movement. We do not always run in the direction our heads are pointing; nor do we restrict our movements to two axes on a plane according to the direction we are facing in. *GoldenEye* and *Perfect Dark* get around this to a degree by offering an 'aim' control that changes the function of the analogue stick, which can control aiming and moving.

Now, you'll tell me that it doesn't really matter, as anyone who is serious about playing *Quake III* on Dreamcast will buy a keyboard and mouse. To me, that's a fabulously regressive argument. Keyboard/mouse control only came about in the first place owing to the dearth of standardised PC peripherals: it is a method of (mis)using hardware that was never designed to act as a game-input device. It is currently the most efficient HCI for FPS titles – yet that's not cybernetic justice. It's not because it is a good interface design, but because these games were coded with that flawed HCI in mind.

Yes, I am arguing that keyboard and mouse is aesthetically inferior to joystick control for FPS games. Partly because, as with *Quake III*, simple binary button-pressing is an inappropriate system for movement, and also because of another, more serious, structural incoherency. Trying to aim a gun in real life is not a matter of 'pointing'; it requires you to direct the gun and use small corrective movements to ensure that the barrel is aligned appropriately along three axes. Such directional control is much better approximated by the use of a joystick than with a mouse. The mouse-controlled reticule privileges no part of the space over any other and requires no more effort to target an enemy half a screen away than one who is a mere half-degree off the centre of your visual field.

So, mouse aiming is far easier than aiming with a stick. And to compensate, PC-based FPS games are made artificially more difficult in other ways. Of course, the maniacally swift movement, 1080° split-second turns and multiple frags of such games are highly entertaining in themselves, but in terms of suspense and player satisfaction, the console-based HCIs – especially the sweetly engineered dual-analogue control of *Time Splitters* – remain superior. When aiming is more difficult, hitting the target becomes that much more satisfying and enjoyable.

To add another example, if Dreamcast *Silent Scope* is played with the mouse, it becomes stupidly easy compared to the directional joypad control. But further, joypad control was an utterly bizarre creative decision in the first place when there exists a firstparty Sega lightgun. Some system of aiming with the gun and using a button to call up the sniper scope could easily have been implemented, and one can only assume that it was fear of the hysterical anti-videogame lobby in the US that prevented it.

The corollary to these arguments about poor interfaces is the fact that new sorts of HCI open up new gameplay possibilities. That is why Shigeru Miyamoto decided that *Mario 64* required a (literally) revolutionary new type of controller. But the danger now is that HCI development might be stagnating. Sony copied Nintendo's analogue stick, but at least they added a second one. Creative twin-analogue systems have only been tried in very few games – the terribly frustrating *RC Stunt Copter* and the brilliantly inventive *Ape Escape* on the other. But it is disappointing that Nintendo and Microsoft have opted for Dual Shock clones for their new systems.

One ray of hope was provided at last year's ECTS when Sony had a concept stand demonstrating the use of giant foam peripherals, such as swords, whose movements were interpreted by a simple USB webcam and translated into the movements of a virtual sword on screen. This is one way in which good HCIs can also open up new markets. The clunky control of *Shenmue* is an instant barrier to the game's merits for someone who hasn't spent years fiddling with similar systems. But *Samba de Amigo* is a great hit at parties, with non-gamers as well as gamers, because the interface is so wonderfully, instantaneously attractive.

Control systems can be bad in two major ways: they can be simply clunky, or actually illogical. *Shenmue*'s manages to be both at once

From the clunky and illogical results we tolerate, it seems that a game's control method is often only finalised in the relatively late stages of development. But to be truly great – and this is as true of *Asteroids* or *Robotron* as it is of *Samba de Amigo* or *Time Splitters* – videogames need to be built around a well-conceived interface from the start.

Steven Poole is the author of 'Trigger Happy: The Inner Life of Videogames' (Fourth Estate). Email: trighap@hotmail.com





AV OUT

Toshihiro Nagoshi, president, Amusement Vision

How multiplatform development will change the industry

This month I'd like to talk about the state of the industry. I guess all of the talk of 'next-generation consoles' will die down soon, but it's interesting to consider these pieces of hardware from a development perspective.

As you know, 'next generation console' means PS2, XBox and Game Cube. But which one of them will take the lead? Which hardware manufacturer will dominate the industry this time around? This is what people are thinking about, but I believe this way of thinking is about to fade. Does 'fade' sound strange? Well, I just mean that established concepts, such as 'Which console will sell and which one will fall?' are now becoming completely irrelevant.

What is a console? It's something which works when linked to a TV set. That will not change. In the same way, popular titles – the best-selling titles – developed for specific hardware, the so-called 'exclusive' titles, will still exist, and that will not change in the future – *Final Fantasy* will appear on the XBox channel, *Dragon Quest* on the PS channel, or *Mario* on the GameCube channel. But this cannot be a longterm solution for game makers. In order to sell the maximum number of copies of any game, the multiplatform solution is becoming vital, which will make the concept of the 'exclusive' title fade away.

We're at a time when the difference between consoles is not as radical as it once was – there is now less concern about what can be done on one piece of hardware that cannot be done on another.

Let's look at Sony, Microsoft, and Nintendo. They have particular things in common: they are big, and their brands are famous worldwide. Now, one of the concerns among gamers is that game production slows when developers run out of money. So what matters to these people is that they know which games will be available on which platforms. And that's quite easy to ascertain. So, ultimately the given hardware does not matter – it's the software that does. It's an obvious point, but one that can hurt game developers.

With a multiplatform strategy, developers are forced to closely study each piece of hardware, which takes a lot of time. It seems that there are many solutions to this, but it is not that simple in reality. I think there is only one immediate answer: if a developer wants to develop a game on several platforms, it has to reduce the number of titles it develops. I think this is going to be the key.

CPU, middleware, and library developments are all important elements of a game project, but they cannot be handled by a single team any longer. In this sense, it looks like it will be necessary to have many teams targeted to particular platforms. In direct consequence, the number of titles being produced will drop. I don't see any other way.

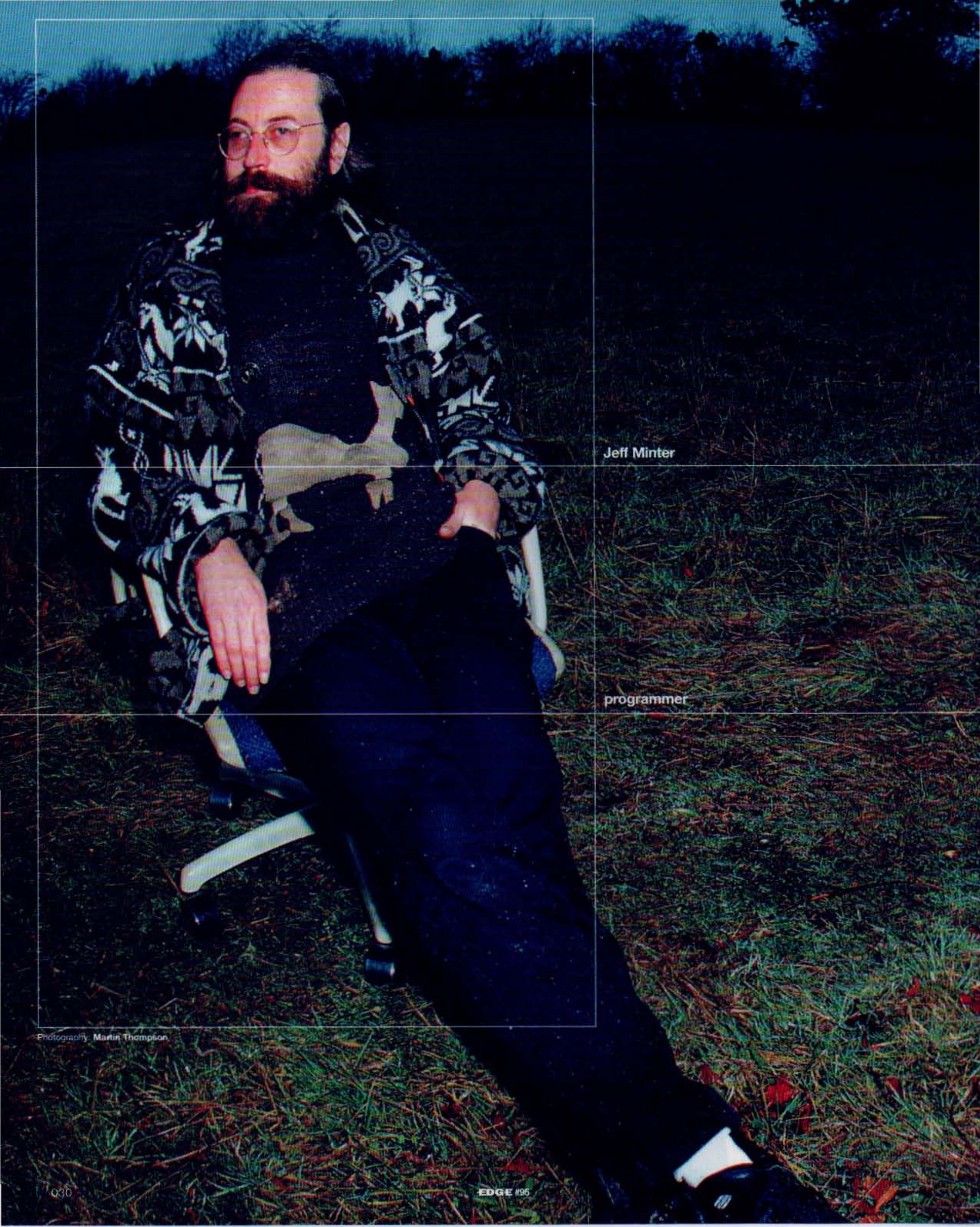
If a game maker decides to release a title on three platforms, the development cost could increase by three times, and that would not be a good business model. So development costs have to be lowered and controlled. On the graphics side, a problem will emerge concerning geometry, which includes polygons and graphic RAM. These elements have to be carefully taken into account in order that textures, for example, can fit perfectly. Now, the use of a library helps in saving precious time, even if it is not always very easy, but it can make things more complicated for programmers. I know the unified use of the C language has been a great help, but if you want to make something better than your competitors, you need to turn to assembler. This will automatically slow down any conversion to another platform, and that will affect your business at the same time. So what can you do? Well, you can ask people to work three times harder, but game programmers are already working twice as hard as anyone. They cannot work more than they do. So the importance of the libraries will become even more prominent.

I don't know yet how much support is available from Sony, Microsoft, or Nintendo, but I believe it will certainly help developers to choose which console to develop for, in accordance with the value of the manufacturers' assistance. I know this isn't something very new. But I think there will only be more companies making and selling these libraries.

That's enough talk about the state of the industry for one month. Let's have a look at what's going to be the real hit console. I believe it will come from the handheld market. More specifically, it will certainly be the Game Boy Advance. Nintendo certainly has style. "With no loss of quality, using this it is possible to do that!" or "In this situation, I can use the console like this!" – these are a few examples of the wonderful potential of GBA hardware. It has more power than its predecessors, of course, but Game Boy became Game Boy Color, and then Game Boy Advance – the product concept and its image has evolved in a totally natural way. And with such a natural evolution, there are fewer barriers standing in the way of customers – they do not face a sharp revolution or change. This evolution affects the mobile phone business, too, with carefully designed extensions enriching consoles and boosting sales of mobiles. Many children do not have a mobile phone, but that could change very soon as more kids will say, "For my birthday this year, I would like an Advance and a mobile phone!" Even if kids do not have a phone, they still can use their parents' mobile in order to download content into their Advance. Moreover, GBA has compatibility with previous models' games. It's light, slim – this system has great potentials and qualities. Sorry, I may be praising this console too much, but there is no doubt it will sell a lot. I want one. Now.

You can ask people to work three times harder, but game programmers are already working twice as hard as anyone

Toshihiro Nagoshi is president of Amusement Vision, formerly Sega subsidiary Soft R&D #4



Jeff Minter

programmer

Photography: Martin Thompson



profile

Videogaming's movers and shakers

"I've got stuff in my head which I really, really want to do. I can see it running in my head, and there isn't quite enough power yet to do it, but there may well be fairly shortly"

For most of his illustrious career spanning back to the very early '80s, the decidedly likable **Jeff Minter** has worked on his own, creating electronic entertainment that displays a violent aversion towards reality. Founder of Llamasoft, Minter's game titles have historically been at least as intriguing as the games themselves. From *Headbanger's Heaven* to *Metagalactic Llamas: Battle At The Edge Of Time*, via *Attack Of The Mutant Camels*, *Trip-A-Tron*, and *Llamatron*, his creations have (at least) graced the Commodore VIC-20, Spectrum, C64, ST, Amiga, Jaguar, and now Nuon.

"I personally don't go for realism at all, my interest is in working in the abstract," he says. "I'm much more interested in exploring abstract graphic spaces that you wouldn't be able to see without these machines to render them. And I want to place my games in those spaces. That's what *Tempest* is like. I love the freedom that that gives you."

Tempest, or rather *Tempest 2000* – Minter's redevelopment of Dave Theurer's 1981 coin-op – marks the high point of the coder's involvement with Atari and the company's ultimately unsuccessful Jaguar endeavour. After parting from was left of this former US videogaming giant, Minter got involved with VM Labs and the development of the Nuon technology (see p54).

After three years in the land of the free, Minter returned to Wales. Still employed by VM Labs, but now surrounded by seven hectares of the countryside he missed so much, he has spent the last two years coding *Tempest 3000* (see p73). The remoteness appears to suit him.

"It's what I've always done, I enjoy it. I can work my own hours and I don't have to do this horrible thing which people have to do when they design a game these days – predefine every detail, storyboard and that kind of thing. Not only is that a pain in the arse, but it stifles creativity. The way I work is that sometimes I'll be just be playing about with the machine and come up with some cool new effect and think: 'I could use that in the game'. And if you're locked down to this specific design where there's no flexibility in it, then you can't exploit those little discoveries you make along the way."

Predictably, then, Minter's development process is uncommonly liberated compared to standards elsewhere in the industry.

"I start with a good overview of what I want the game to be like and then, as I work on it, I refine it and sometimes find new chunks of gameplay come into it just by messing with some technique. I like to be able to do that. I don't think I would work particularly well in the way in which it seems to be done now where it's all specced out first, and then just handed off to a bunch of coders."

Give him another 12 months or so, and another game will come out of Wales. But this time, rather than a remake, Minter feels it's time for something completely original again.

"I've got stuff in my head which I really, really want to do. I can see it running in my head, and there isn't quite enough power yet to do it, but there may well be fairly shortly. Again, it's abstract ideas, in a way bringing together the idea of videogaming and the idea of VLM [Virtual Light Machine]. It would still be goal oriented but… it's just the amalgamation of those two things – videogame and VLM… it's hard to explain, I'll have to do it."

No doubt he will.

Edge's most wanted

Galleon

Toby Gard's theories on animation have only served to whet **Edge**'s appetite for his swashbuckling pirate adventure. Release is scheduled for Q4.



(PC) Interplay

Virtua Fighter 4

Regarded by many as the true victor of the beat 'em up arena, the *Virtua Fighter* series is coming to the arcade. And then the home consoles will follow...



(coin-op/PS2) Sega

Lotus Challenge

GT3 may be a joy to play, but on current form it contains little of the promising structure that Kuju's racer would appear to be dying to offer the world.



(PS2) Virgin

Castlevania Advance

After the disappointing 3D outings for the franchise which appeared on the N64, a welcome return to two dimensions will hopefully herald a return to form.



(GBA) Konami

Walk this way

Or: the boredom of virtual rambling

Buy a driving game and you can easily obtain a steering wheel to enhance the experience. Similarly, many other videogame activities are sold on the fact that peripherals can bring gamers closer to the real-life equivalent: maracas for *Samba de Amigo*, skateboard devices for *Tony Hawk's*, even fishing reels for catching virtual tuna. Strange then that a peripheral hasn't been developed for the activity which gamers must all participate in the most – rambling.

Force gamers on to treadmills and designers would soon have to rethink the way they structure their games. It's not the exertion which would be offputting – although exercise and videogaming rarely appear in the same sentence – but the mindless wandering which seems to be a key component in so many games. The opportunity to explore an open world is something to be cherished, but only when goals are clearly defined.

Legend Of Zelda: Ocarina Of Time achieves this balance by presenting a world which gradually opens up as the player collects items and clues. The illusion of freedom is superbly engineered, but actually Hyrule's green fields, forest glades, and mountain passes are incredibly well signposted. Once more locations are unlocked, the player has the choice to investigate the whole map. Most don't bother, but having that choice is important, nevertheless.

Soul Reaver by contrast is a game, which, for all its merits, expects the player to wander endlessly around searching for new areas to explore. Portals can whisk the player around the title's labyrinthine underworld, but the uniform colouration of many locations only serve to confuse and confound. A glyph conjuring up a trail of bread crumbs may have been a more practical addition to Raziel's spell list.

Some games seem to positively invite the tag of 'walking simulator'. *Project IGI*'s insistence on realworld physics went to ridiculous lengths. True, you could survey an enemy compound from a distant hill to plan your way in, but walking the huge distance towards the enemy base every time the game restarted was ludicrous. Creating a save point near to your selected entry place may have broken the 'realworld' spell, but it would also have improved the game no end.

Designers creating surreal or magical worlds really have no excuse for forcing the player into backtracking hell. **Edge** hopes that *Evil Twin* (below) will employ some suitable device to reduce treadmill tedium.







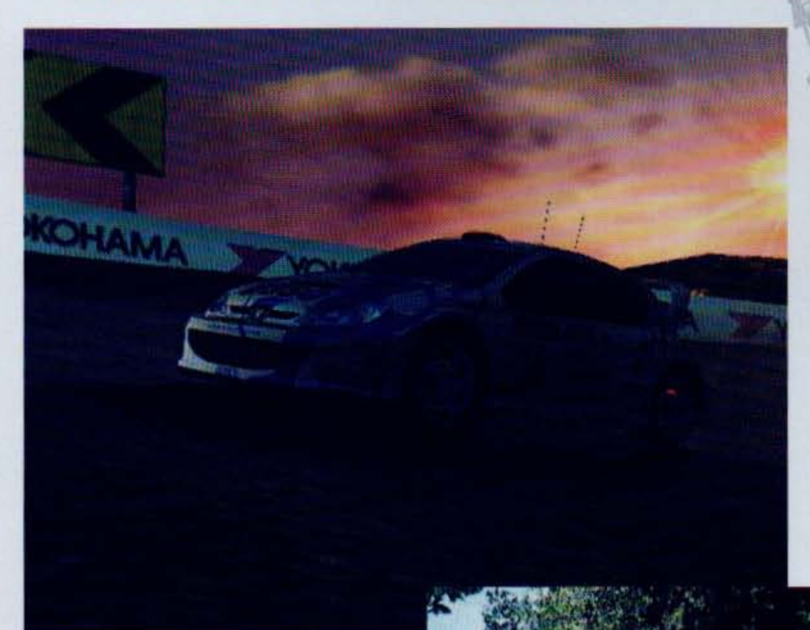




Gran Turismo 3 A-spec

Format: **PlayStation2**
Publisher: **SCE**
Developer: **Polyphony Digital**
Origin: **Japan**
Release: **April (Japan)**

Delayed but not forgotten, Polyphony Digital's first 128bit racer is confined to the garage a little longer while the final engine tweaks are executed



It has been a long road for the third instalment of the most successful PlayStation racing franchise ever. Originally due for the PS2 March 4 launch in Japan, *GT2000* (as it was then named) has since undergone various postponements and a name change.

Gran Turismo 3 A-spec, then, features 150 cars, of which 138 have been road tested before – Honda NSX, Mazda RX-7, Mitsubishi Lancer Evo VI (fear not, the Tommi Makinen Edition is also included), Nissan R390 GT1, Toyota GT-One, Ford Mustang, Aston Martin DB7, Lotus Elise, Renault Clio Sport V6, TVR Speed 12, and so on. Polyphony has removed most of the mundane hatchbacks and saloons found lumbering on previous versions, and understandably concentrated solely on the top layer of the performance scale. The remaining dozen are presumably new to the *GT* garage and will be revealed on release.

More interesting is the announcement that the game enables up to three PS2s to be linked together for up to sixplayer simultaneous action. The link feature had been explored for *Gran Turismo 2*, but the drain on the PlayStation's chipset made its inclusion impossible, and players wishing to take on the most advanced form of AI had to make do with the splitscreen option.

Edge hasn't been able to test this new feature yet, but preview code materialised and was duly rigorously inspected. The disc includes three playable tracks (Trial Mountain, Seattle, Smokey Mountain South) and three vehicles (Castrol Supra GT, Honda S2000, Subaru Impreza WRC).

The handling has been refined and therefore continues to be wondrous. There's a level of delicacy resulting from a fundamental understanding of playability that is simply missing from the majority of current racing games. The sound, too, is standard-setting. The graphical quality is also excellent – the dust effect during the rally sections is superbly conveyed – with some masterful handling of the lighting clearly evident. Extremely well implemented, too, is the Dual Shock feature, which (particularly on a rally track) continuously relays information on the road surface very much in the manner a real steering wheel does, accurately painting a picture of what the tyres are up to.

However, there are niggles. Despite the massive visual enhancement, it's still disappointing to note that tyre marks are missing, regardless of how sideways you decide to take a bend. And then there's the fact that very little of *Gran Turismo 3* is likely to be all-new – unless fresh features (structural or otherwise) have been included. But that will be apparent soon enough.



At this stage, the refined handling is perhaps best experienced during the game's rally sections, with cars behaving remarkably as you'd expect them to



The graphical detail on the varied vehicle selection could easily set a new standard for PS2 racing titles





Force Feeding

Developed specifically with *GT3* in mind, the fully analogue wheel setup is a true force-feedback unit which plugs into the PS2's USB port. Shown at last year's ECTS, the wheel impressed the majority of showgoers who bothered to queue up for a spin. Expect **Edge**'s report once *GT3* is out.





The Rome course is one of the 15 promised for the game. While 13 of those should be familiar to *GT* veterans, the last two – Monte Carlo and Tokyo (above right) circuits – are new additions to the series

The Moon Project

Format: **PC**
Publisher: **Games Studios**
Developer: **Topware Interactive**
Origin: **Germany**
Release: **April**

Topware Interactive flies you to the moon and lets you play among the stars in a sequel to the successful *Earth 2150*

Even *The Moon Project* press release acknowledges that the RTS genre is stagnant, but given that it's one of the few types of game sure to generate heavy sales among PC genre zealots, it isn't surprising that so many developers continue to work within its limitations. Perhaps that's a little unfair on Topware, since the developer is something of specialist in this field, and has four other strategy titles in development for release this year alone. Naturally, each offers a slightly different spin on the overused abbreviation – there's the RPG RTS with *Two Worlds*, or the hardcore RTS in the realism-based *World War 3*. This, though, is the one most of the unit-shifting fans of shifting units will be waiting for.

The arrival of *The Moon Project's* predecessor, *Earth 2150*, introduced realistic curved terrain to a genre dominated by the pseudo-3D battlefields of *Command & Conquer*. Those disillusioned by Westwood's sequel-as-update *Tiberian Sun* suddenly found themselves in love with the genre all over again; whether *The Moon Project* will attract a similar amount of attention is still open to question. This is a sequel played straight, to the extent that it actually covers the same futuristic conflict as the previous title. This time the battle between the Lunar Corporation and the United Civilised States takes place on – yes – the moon, where the Corporation is working on a 'Project Sunlight'. The results of the experiment, which become apparent part way through the conflict, force both sides to change tactics.

That's the twist, but elsewhere things seem reasonably static. There are updated units, structures, and maps, along with the expected range of new special effects and strategy-altering disasters. The RTS vogue for unit recycling is now an option for those who find themselves regularly changing their mind and their strategy, and an extensive range of new multiplayer maps and missions looks set to please those who'd rather kill their friends than their PC.

Intriguingly, *The Moon Project* also comes with its own script language, which promises to enable the player to design their own story campaigns and configure each unit type to their own specifications. Textures, too, can be imported, meaning that – in theory at least – budding level designers needn't be constricted thematically. It's a move clearly designed to attract the mod-making community to the game, and this may be enough to offset the game's non-progressive nature. *The Moon Project's* level of success may well depend on how well the PC community adapts to the challenge of building around craters, rather than with crates.





This being the moon, it's safe to say *The Moon Project* isn't one of the most spectacularly hued games around. Still, budding artists will be able to retexture the surface into something more colourful



A glance at the screenshots should be enough to steady the nerves of traditional RTS fans. All the usual elements are here – the micro map, the individual unit health indicators, and the suitably satisfying explosions

Progear

Format: **Coin-op**
Publisher: **Capcom**
Developer: **Cave**
Origin: **Japan**
Release: **March (Japan) TBC (UK)**

Remember having to make your way along the television screen from left to right, avoiding enemy fire while shooting everything in sight? Capcom does

Rather than overcomplicate the controls, developer Cave has opted for a straightforward two-button approach which should leave more brain matter to focus on dealing with the typical 2D shooter stumbling block of a screen littered with enemy projectiles to avoid

Though momentarily forgotten, 2D shoot 'em ups are undergoing something of a resurgence in popularity at the moment. They have remained popular in Japan, of course, but widespread support for the genre in the west soon vanished with the arrival of the 32bit age – specifically, with the arrival of PlayStation (for most of its life, the Saturn continued to play host to some fine shoot 'em up specimens). Seemingly overnight, 2D wasn't welcome any more.

Developed by diminutive outfit Cave, *Progear* retains a pleasing traditional approach, while also including a few twists of its own. Two aeroplanes, the Gambler and the Militant, are up for selection, each with its own shooting characteristics – vulcan cannon or spread shot (wider range, but weaker) – and just two buttons occupy your digits – shot and bomb/special move. Interestingly, it's possible to switch between fire modes by altering the way you press the shot button. So you can switch to Fighter mode (higher firepower), Gunner mode (weaker but with auto-lock function), or a third mode that has yet to be revealed.

Naturally, a 2D shooter wouldn't be complete without hundreds of enemies or a generous amount of bonus items to collect, and in this area *Progear* doesn't disappoint. Collecting these not only reinforces weaponry, but also add new features to your aircraft.

Nothing revolutionary, then, but potentially very enjoyable – if traditional – stuff. But then the instant gratification offered by 2D shooters is likely to ensure they'll be around for a while yet.

Street Fighter Zero III Upper

Format: **Coin-op**
Publisher: **Capcom**
Developer: **In-house**
Origin: **Japan**
Release: **Out now (Japan) TBC (UK)**

Capcom delivers another unusually uninspired *Street Fighter* update, whose saving grace currently looks to be a VMS transfer whereby homegrown fighters can take to the arcades

Anyone expecting a complete revamp of the *Street Fighter* dynamic will, naturally, be disappointed. That isn't Capcom's style: a few characters here, a few special moves there, and everyone's happy.

Street Fighter Zero III is essentially the Dreamcast version ported to Naomi GD-ROM, which is handy for arcade owners wishing for a new crowd-puller on the cheap, but less thrilling for the crowds themselves.

In update terms, Guile makes a reappearance, as do three other faces from *Super Street Fighter II* – martial arts expert Fei Long, Jamaican kickboxing superstar DJ, and the Zangief-like American Indian T. Hawk. M. Bison's back under player control as well, along with the other characters only available for computer selection in the earlier versions of *Zero III*, including Juni, Yuri, and 'Special' Ryu.

Perhaps the most exciting element here is that a VMS slot in the coin-op will enable the import of characters from the DC version. ISM, a system that enables the editing of special moves, should also serve to produce some a more homegrown feel to the brawls.

Fun, but Capcom's development policy is uninspiring. While this may be a good way of making money, the *Street Fighter* franchise seems to be losing its edge.



Ryu masters will be able to renew old acquaintances with adversaries like Akuma, but will also have the chance to battle as Bison. The ability to select your fighting style before the battle remains, as do the super special moves, reinforcing the oft-visited *Zero/Alpha* style





Serious Sam

Format: **PC**
Publisher: **Rockstar Games**
Developer: **Croteam**
Origin: **Croatia**
Release: **Q2 2001**

Croatian developer Croteam clearly means business with this firstperson shooter, which makes up for what it lacks in brains with brawn enough to satisfy even the most aggressive







The weapon set doesn't appear revolutionary, with shotguns and rocket launchers making an appearance. Croteam has instead focused on creating a roster of memorable enemies, ranging from the plain ludicrous (left), to the genuinely fearsome (above), and the simply irritating (right). The scale of some creatures later in the game is one of *Serious Sam*'s most obvious achievements

On the face of it, with its daft monicker and a selection of enemies whose inspiration could have come from the sketchpad of a child with a particularly warped imagination, *Serious Sam* doesn't appear to have much going for it. Step into its lavishly rendered world, however, and things begin look up.

Using its own 'Serious' 3D engine, Croatian developer Croteam is returning to firstperson shooter roots with *Sam*. Exchanges between yourself and the other characters are never verbal, being conducted instead by sheer firepower, although Sam himself occasionally grunts the odd remark, Duke Nukem-style, such as: "It was a trap!" And traps punctuate the entire gaming experience: collecting just about anything of real value sees the instant generation of enemies bent on taking you down.

Sam owes a serious debt to *Doom*, then, but although in many respects it is a retrogressive step for the FPS (it's more or less an Arnie flick to *Deus Ex*'s 'Mission: Impossible'), the preview version **Edge** has played at some length proves strangely compelling nevertheless.

This is no-nonsense gaming – a pure test of kill or be killed – delivered with a healthy dose of technical finesse. Expect a review next month.

Gangsters 2

Format: **PC**
Publisher: **Eidos Interactive**
Developer: **Hothouse Creations**
Origin: **UK**
Release: **Q2**

Hothouse Creations returns to prohibition-era racketeering in the US, and invites the player to climb the crime ladder from street hood to crime kingpin







Gangsters 2 is much more character driven than the first installment, with the player overseeing the progress of the lead character from street hood to crime kingpin. On the way, the services of a variety of henchmen will be required, and the more useful can be incorporated into positions of responsibility within the crime family. The city newspaper provides updates on player progress and other information

While the original *Gangsters* was reasonably successful, both critically and commercially, it wasn't much more than a competent example of realtime strategy with an alluring, prohibition-era theme bolted on. For the sequel, the same development team has set its goals higher, with prohibition and its associated activities at the heart of the game, which now charts the progress of players from the very bottom to the very top of the criminal hierarchy.

The player takes on the role of Joey Bane, who enters the criminal underworld after seeing his father gunned down, and who receives helpful, tutorial-like advice from his uncle. Fittingly, the opening mission sees Bane getting his hands dirty with a revenge hit, before his position becomes more elevated in later missions, which include running a casino and rescuing the mayor's kidnapped brother.

In all there are 20 missions set in 18 pregenerated cities (in contrast to the randomly generated cities of the original title). A new engine and interface spruce things up, and a context-sensitive mouse pointer makes things a little easier for beginners, but the real addition is the 'family tree', which enables the player to retain favoured henchmen throughout the course of the game (or dispose of them, 'Goodfellas' style).

Three Kingdoms

Format: **PC**
Publisher: **Eidos Interactive**
Developer: **Overmax Studios**
Origin: **China**
Release: Out now (China) **Q2 (UK)**

Beijing-based Overmax Studios promises an enjoyable realtime strategy run-out in 14th century China, which manages to challenge without overcomplicating the action

It could be argued that, as a gaming category, realtime strategy reached the peak of its playability with *Warcraft II*. Although *Three Kingdoms: Fate Of The Dragon*, developed in Beijing, is unlikely to overhaul the basic mechanics of a winning formula, its historical authenticity and the concomitant emphasis on a more thoughtfully strategic approach are certainly promising.

Based on events told in a 14th century history written by Luo Guanzhang, the game picks up after the demise of the Han dynasty some ten centuries earlier, and features 45 missions. Multiplayer is, of course, supported, including a cooperative mode, and victory can be achieved through both military superiority and diplomatic supremacy.

With some 300 real-life characters to recruit as officers, there is considerable scope for tailoring your forces. But more consequential is the need to establish supply chains to support long-distance attacks on opposing cities, reducing the 'tank rush' principle that undermines similar games, and which is supplemented with a *Baldur's Gate*-style space bar pause to issue orders.

Despite this more cerebral approach, *Three Kingdoms* remains intrinsically simple, suggesting that this is a title that armchair generals can look forward to.







Although the game is true to the historical detail of Luo Guanzhang's literary history, this doesn't rule out magic-like effects. Indeed fate, representing the favour of the gods, is a crucial resource to be managed alongside other raw materials. Generals who forfeit the favour of the gods are more susceptible to natural disasters, while high fate results in the rapid growth of a kingdom's population

Evil Twin

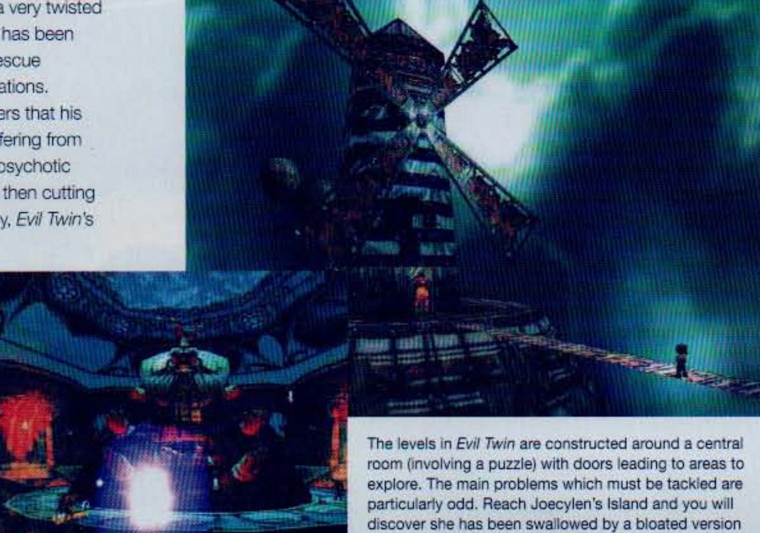
Format: **PC, Dreamcast**
Publisher: **Ubi Soft**
Developer: **In Utero**
Origin: **France**
Release: **May**

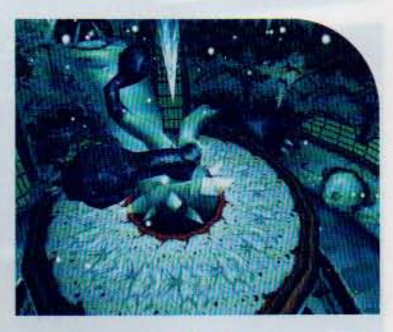
Enter a nightmarishly surreal gameworld where psychotic nurses are the norm, problem solving involves increasingly visceral means, and twisted logic is the driving force

Ubi Soft is keen to emphasise that *Evil Twin* is not a game for kids. Though very much based around youthful imagination, developer In Utero has added a very twisted and nightmarish aspect of its very own. Hero Cyprien has been warped to the surreal world of Bed'under and must rescue friends caught in increasingly bizarre and perilous situations.

On Stephen's Island, for instance, Cyprien discovers that his colleague is trapped in a giant schoolroom, and is suffering from perpetual detention. The solution involves avoiding a psychotic nurse, finding the Sandman to cast a sleep spell, and then cutting open the teacher's head with a pair of scissors. Clearly, *Evil Twin*'s imaginative take on the platform adventure will be its defining characteristic.

To add further variety to the game the hero is capable of transforming into Super Cyprien. This process endows Cyprien with more powerful offensive capabilities and the ability to execute greater leaps, but makes precise positioning a more difficult prospect. A catapult which fires paper planes (which can be piloted) is also a nice touch. Typically, however, camera imperfections, which are still evident, could spoil an otherwise ingenious title.







The levels in *Evil Twin* are constructed around a central room (involving a puzzle) with doors leading to areas to explore. The main problems which must be tackled are particularly odd. Reach Joecylen's Island and you will discover she has been swallowed by a bloated version of herself. The only way to free her is to construct a hideous omelette with ingredients to make her vomit

Crazy Car Championship

Format: **PC, Mac**
Publisher: **TBC**
Developer: **Synaptic Soup**
Origin: **UK**
Release: **TBC**

Currently looking technically impressive, nine-month-old developer Synaptic Soup's debut game has Edge pleasantly intrigued







Hopefully, *CCC* will feature more than just interesting visuals. Nine original characters are promised, along with 18 power-ups and a presumably traditional competition structure, regardless of the fact that you're racing on the floating island of Celestis. Expect a frantic atmosphere

Here's the deal: *Crazy Car Championship* sees you building hybrid vehicles (anything from steam-powered hovercraft to quantum-engined futuristic hotrods, apparently) from a variety of components, which you then race on a series of flying islands. But while the premise is certainly different, familiar elements such as power-ups are included.

Still in its early stages, the game is being created by a developer comprising of former core members of the *Evolva* team, as well as ex-Bullfrog employees. The team is confident Cipher, its multiformat game engine, is capable of handling the impressive visuals seen here while maintaining a high frame rate, as well as delivering rapid LAN and Internet play. Furthermore, the engine's characteristics are said to be focused on providing easy, cost-effective cross-platform development, and the team is expecting to create games on next-generation platforms, the PC, and Mac. Cross-platform multiplayer gaming is therefore also supported.

While *Crazy Car Championship* has been designed with the above in mind, solo gamers haven't been forgotten – a substantial oneplayer event is promised. **Edge** will keep an eye out for more details.





Lotus Challenge

With its head high in the clouds and its foot firmly on the accelerator, Edge finds out how far down the road towards perfectly balanced racing Kuju Entertainment's Lotus-licensed title has travelled

The tight hairpin at the end of the back straight is approaching at 125mph. Leaving the braking ridiculously late, three seconds of frantic heel-and-toeing persuades the gearbox to select second. The engine roars, as if upset that its triple-figure run has been so violently brought to a sideways 30mph crawl. Delicate steering input keeps the back end from suddenly making its way to the front and then it's back up the gears until the next corner turns up. You don't want to know how fast the artificial chicane is taken.

Having survived three demonstration laps by one of Lotus' test drivers in an Exige (essentially a roadgoing racer based on the Sport Elise competition car) at the manufacturer factory's test track in Hethel, Norfolk, the adrenaline levels have barely fallen by the time **Edge** makes its way back into the hospitality suite, where members of Kuju sit around with 'seen it, done it' expressions. Running on a television in one of the corners is the latest version of *Lotus Challenge*, the essence of which Kuju and publisher Virgin decided would be best appreciated in an appropriate setting. Hence the fascinating tour of the factory. Hence the opportunity to drive the ludicrously styled, high-revving, and astounding-handling Lotus 340R fast around the track. And hence the chance to go round the latter faster still, by letting a professional take the wheel.

In the six months since **Edge** last saw *Lotus Challenge*, there have been some changes. While the car count is still hovering around the 40 mark, a figure which includes six Formula One



Graphically, things have improved significantly since **Edge** last saw the game. Baverstock claims the hardest aspect so far has been managing the 22-strong team, the biggest Kuju has had to date



Format: **PlayStation2**
Publisher: **Virgin**
Developer: **Kuju Entertainment**
Release: **July**
Origin: **UK**

Photography: **Martin Thompson**





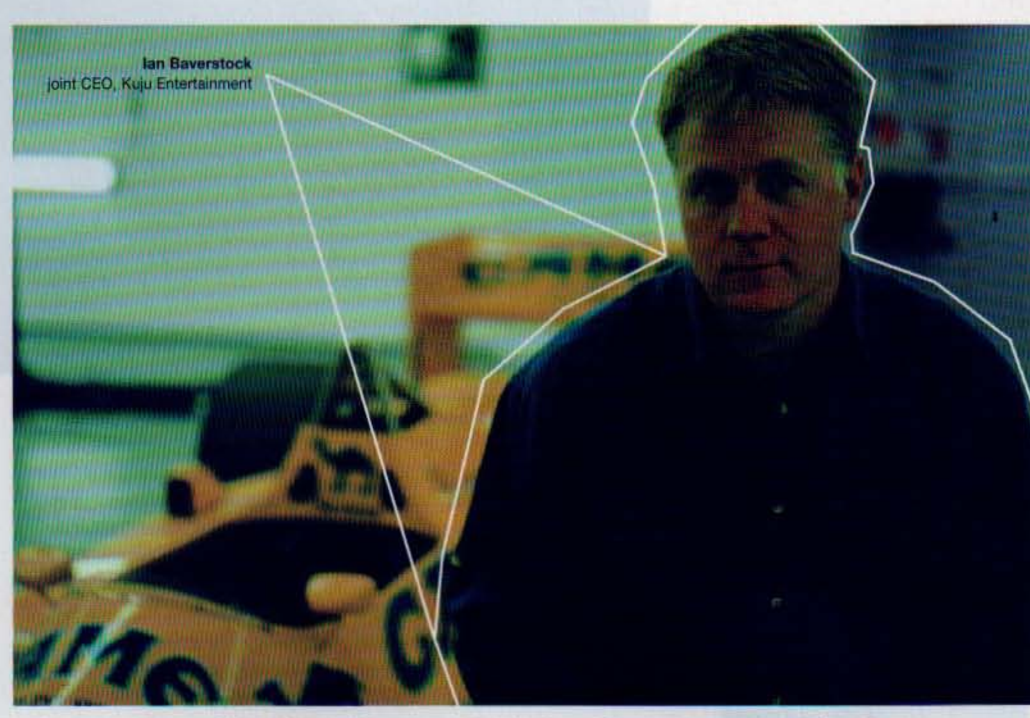
Other than extensive track time with Lotus's finest, the team believes its ability to get plenty out of PS2 stems from its mix of PC and PS programmers, given that PS2 games require elements of both



Lotus Exige
circuit king

vehicles, and there are still 15 racing circuits and approximately 10 stunt-specific tracks, the game's structure is now a little more defined. **Ian Baverstock**, Kuju's joint CEO, elaborates: "The Challenge mode is the main game mode. In this you drive for the 'Lotus Challenge Team', which not only drives in races but also gets called in to do film and advert stunts, as well as special car-related events. For example, one day you may be competing in a world championship race, the next taking part in a game of car football, and the day after that filming car stunts for an action movie. This should give the player an immense amount of variation in terms of driving experiences."

This mode contains 30 levels, but rises to 36 if you take into account the fact that by playing it through with the two different drivers offered, some of the missions differ. But traditionalists shouldn't let this seemingly innovative take on a prestigious licence frighten them off – *Lotus Challenge* also includes standard Championship and Arcade modes.



Ian Baverstock's (seen here with Ayrton Senna's 1987 Lotus Honda in the background) favourite Lotus is the Type 62 Sports Prototype, a special car which combined a massive engine with the Europa chassis and F1 wheels. Only two were ever made. And yes, it's in the game

A good racing grounding

Ask Baverstock which feature the 22-strong team has come up with that he is proudest of, and he immediately focuses on the handling. "We have what we believe is the best driving model in any console racing game," he says, defiantly. "When you say this, people interpret it as being a really hard simulation-type model. This is only half true. Just because it's a simulation doesn't mean it's hard. Surely if it was a correct simulation, anyone that has a driving licence should be able to pick up the game and play it. Then anyone who wants to push himself or herself further can do so. That's what we're aiming for, and I think we're pretty much there on that one."

"We have the best driving model in any console racing game. When you say this, people interpret it as being a really hard sim-type model. Surely if it was a correct simulation, anyone that has a driving licence should be able to pick up the game and play it"



Certain sections of the game include public roads complete with civilian traffic. Not for the first time, the AI is claimed to be highly evolved. If true, it could make all the difference

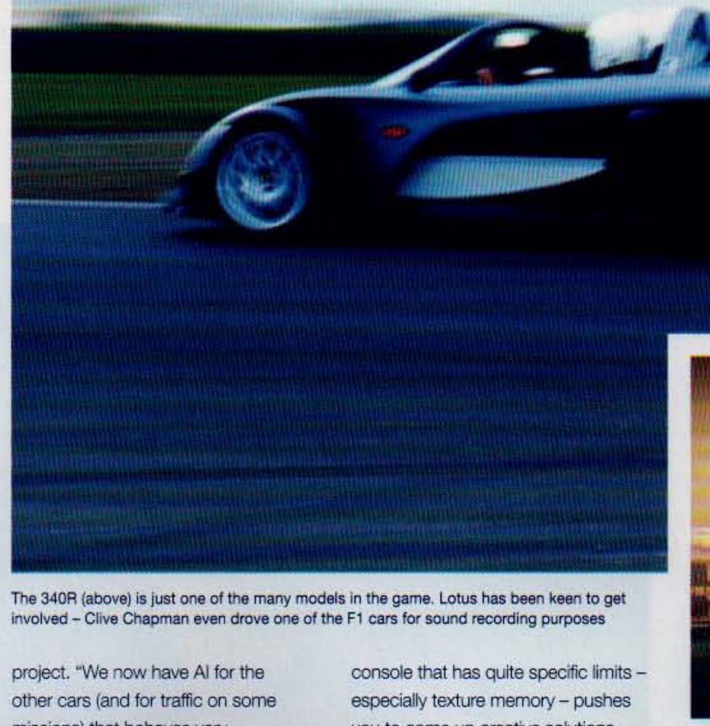
Confident, if common, driving game developer talk. The last time **Edge** played the game, however, directional input was a little severe. The handling itself, as Baverstock rightly says, appeared both accurate and comprehensive, but its playability was slightly hindered by the almost digital nature of the steering.

However, there's time to tweak before July, and it's not as if that's all Kuju has been doing since last August. *Lotus Challenge*'s AI has also developed, and at the time of writing is possibly the most improved facet since **Edge** first encountered Kuju's





Expect further details to emerge as the game nears its summer release. In particular, **Edge** is keen to see the Lotus F1 cars in action. If only in virtual form, of course



The 340R (above) is just one of the many models in the game. Lotus has been keen to get involved – Clive Chapman even drove one of the F1 cars for sound recording purposes







Interestingly, some thought appears to have gone into designing the game's structure (which is unusual nowadays). As such, expect the game to provide varied action

project. "We now have AI for the other cars (and for traffic on some missions) that behaves very realistically," Baverstock enthuses. "Different drivers will have different attributes, and you will see this on the track. Some will be more timid and let you overtake them easily, while others will do their utmost to stop you getting past. We even have them changing their aggression factor towards you as the race goes on. If you start bumping into one he will get quite upset and may even decide to go after you. All of this makes the game so much more fun to play."

The sky's the limit

Given that Codemasters' excellent *TOCA World Touring Cars* took a similar approach, that much seems assured. But, interestingly, the AI isn't the most interest-grabbing aspect of the title – at least not as much as *Lotus Challenge*'s clouds, which are some of the best examples yet seen in a videogame. Once again, Braverstock is on hand to unravel the development processus: "This is quite a good example of how working on a console that has quite specific limits – especially texture memory – pushes you to come up creative solutions to problems that would never have happened otherwise.

"Normally on a PC game the sky would be represented by a massive texture because you can afford the memory. On the PS2 you can't really use up all your texture on the sky, so we created the clouds from smaller individual textures which we lit differently and created three layers of all these cloud shapes. The look is then very realistic, as you get a good feeling of depth – and you also get the added bonus that they are separate shapes that can be moved relative to each other to simulate wind. The final effect is something that looks better than the 'lazy' solution, which would be used if the extra texture memory were there."

But then *Lotus Challenge*'s visuals have never really been a real point of concern, something confirmed by the latest shots. When compared to a lot of current PS2 games, Kuju would appear to have got to grasps with Sony's reputedly harsh 128bit development environment better than most. So is it just a case of a divergent approach?

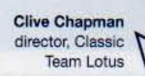
"One big difference is that we are using our own custom engine," states Baverstock. "Many development houses go for something like *Renderware*, which does the job but will never push the PS2 to its limits because it's designed to be general and versatile and to work on other platforms. This means there are many PS2-specific features that won't be used, and lots of compromises that will be made. We have the technical knowhow to write our own custom engine that is designed to be optimal for racing games, and this will give us a vital edge in performance. It means you have so much more power available to do all the extra things you want to do."

Those extra things will reveal themselves as the launch date approaches, but currently things are looking rather favourable for Kuju's racer. "Lotus cars have always been about the driving experience, and that's what we want our game to be about," concludes Baverstock. "At this point in time, I would say we are 95 per cent there in this area. By the time the game is out I'm sure we will be fully there."

Rather than a straightforward exploitative license deal, the developer appears keen to deliver an experience befitting the prestige of this great sportscar marque. It certainly appears to have its wheels currently pointing in the right direction.

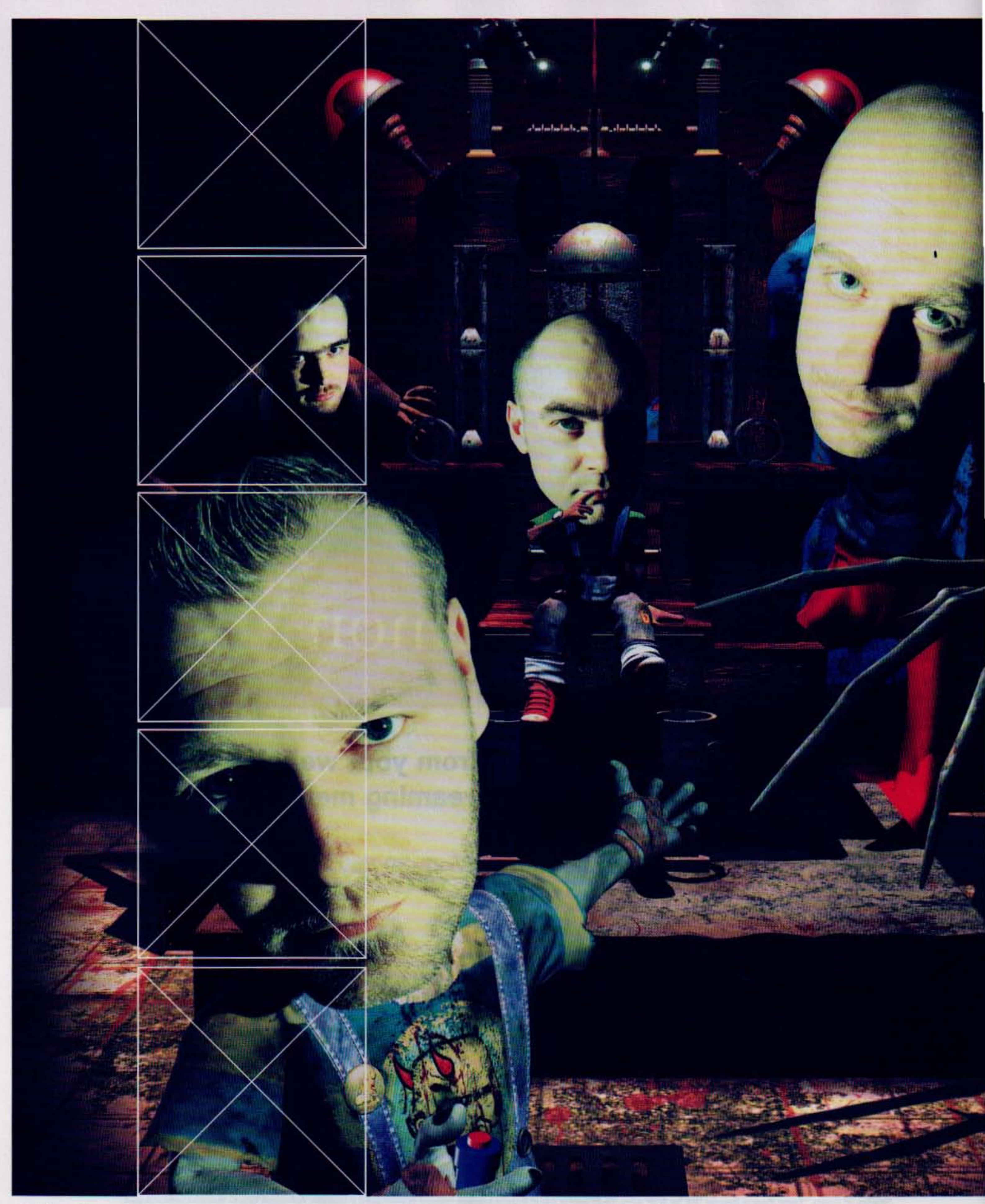


Although not shown on these pages, Lotus's design studio has created four concept cars specifically for the game. The Super Seven (above)



Clive Chapman
director, Classic Team Lotus






Photography: Martin Thompson

Inside…

Cool Beans Productions

Since 1996 this Sheffield-based studio has harnessed the cream of the country's comic-book talent, producing animations and artwork for videogame companies. With the advent of 128bit consoles, it may soon be making games itself

There has always been an overlap between the worlds of videogames and comic books. Visual hyperbole and graphic storytelling are common to both, and there is considerable shared ground in terms of subject matter. So it came as little surprise last year when Rebellion acquired *2000AD*, drawing attention to the synergies between the two industries. But while that deal got all the exposure, Sheffield-based digital animation studio Cool Beans Productions has quietly been getting on with tapping the pool of British comic-book talent in the service of the videogame industry, providing computer-generated animated sequences and publicity art for companies like Electronic Arts, Infogrames, Activision, and Hasbro Interactive.

Having originally started life off the back of a pitch for a videogame, this year sees the studio expand its remit with an Internet channel devoted to original content produced by some of the biggest names in British comics, which may also enable it to extend the range of services that it offers videogame developers.

The men at the helm of the studio, which was spun off from localisation company Polylang, are brothers **Nick** and **Matt Percival**. As a 19-year-old in 1989, Nick, the company's creative director, cut his teeth drawing high-profile strips such as Slaine and Judge Dredd for *2000AD*, working with respected comic-book writers like Pat Mills and Garth Ennis, as well as working on film preproduction work – including work for the Dredd movie starring Sylvester Stallone. Operations and Internet director Matt, on the other hand, specialises in gag cartoons, having had work published in *The Times*, *Private Eye*, and *Punch*, among others.

Although the two had been involved in Polylang's localisation work for companies such as Mirrorsoft and Microprose, the real gestation



Matt Percival

Nick Percival
creative director

Diane Rodgers
digital editor

Adria
lead

Wayne Elliott
lead texture artist

FAQ

Company name: Cool Beans Productions

Founded: 1996

HQ: Sheffield

Number of employees: 30

Softography: *Tony Hawk's 2* (Activision); *Spider-Man* (Activision); *Judge Dredd* (Egmont/Fleetway); *Turok 3* (Acclaim); *Carmageddon* (Sci); *Tenchu II* (Activision); *Soldier Of Fortune* (Activision); *Hogs Of War* (Infogrames); *Command & Conquer: Red Al* *2* (Electronic Arts); *Armorines* (Acclaim)

Projects in development: Marshall Law (computer-animated series); Doomkeeper (computer-animated series); Dark Frankenstein (animated comic strip); Scarlet Traces (a sequel to War Of The Worlds); Cartoonscape.com (Web site); *Z: Steel Soldiers* (Bitmap Brothers); The Yattering An Jack (comic strip); Saintly (computer animat movie); Cool Beans World (Internet channel)

of Cool Beans occurred when Nick decided to develop his own characters and storylines. The concept that he came up with, while still working on a Slaine strip for *2000AD*, was that of Saintly. Although the current incarnation of the project is as an animated action-horror movie – in which a hellish carnival causes darkly gothic trouble in small US town – things were different when it was first conceived. "The connections were there with videogames from PolyLang," explains Nick, "and so we initially thought of maybe making Saintly into a videogame, because we had a very good core concept fleshed out, with all the characters designed and all the support

who contacted the studio to change the length of his socks and the colour of his T-shirts in a rendered image – is not the only aspect of the work done by Cool Beans Productions. "One of the things where Cool Beans differs to a lot of studios is that, yes, we're a work-for-hire digital animation studio, but we always did want to create our own stuff, develop our own concepts, our own characters, and so on," continues Nick. "One of the outlets for that is the Saintly movie, but we've got so many great characters that we wanted to explore on the storytelling side, which led to the idea of Cool Beans World, the Internet channel that we're in the process of building at the moment."

Having started life off the back of a pitch for a videogame, this year sees the studio expand its remit with an Internet channel

materials in place." The idea was pitched to several publishers, but back in the days when PlayStation and Saturn were considered cutting edge – and before PCs had caught up through innovations such as 3D graphics cards – Saintly's high-end visuals were well out of reach. "All the pitches went extremely well, but the feeling was that the technology wasn't there to support the game. At that point we'd already done a lot of the characters in-house, and Cool Beans was expanding, so the decision was made to push down the CG animation route. We had good connections in the UK film industry anyway, and interest really began to build because no one had seen anything like 'Toy Story' for adults before. So we were developing this horror-action film, but at the same time this led us to be able to offer this service back, full circle, to the videogame industry. Technology had caught up, with people wanting FMV, box art renders, and so on, and Cool Beans became a company that was offering all this."

Animators for hire

Indeed, these 'for hire' animation services currently form the core component of the studio's business, though just as gaming technology has improved, so too the nature of the studio's work for the videogame sector has changed. "Initially it would just be a question of getting somebody like Simon Bisley to paint a cover for the box – like the Bitmaps did with *Gods*, or Glenn Fabry for *Speedball 2*. So originally it was more of a showpiece to have a cool piece of artwork, because the technology wasn't really there to do anything with sprites." Now, though, the company provides a range of services, including FMV sequences and rendered box art.

But producing work to constraints imposed by others – Tony Hawk, for example,

Although this channel will be subscription-based, the Percivals believe that combining exclusive content from some of the biggest names in the British comic industry with an enhanced form of graphic storytelling will attract the required audience; certainly Matt is keen to point out that the company secured outside funding for the endeavour after the dotcom bubble had burst.

"One of the advantages that we believe we have," argues Nick, "is that the comic-book content on there is by top-name comic-book creators, and you're not going to get it anywhere else – it's totally exclusive to Cool Beans. If you want to see Simon Bisley's 'Doomkeeper' CG animation, with all his supporting paintings, all his storyboards, the only place you're going to see that is on Cool Beans World. If you want to see brand new 'Marshall Law' comic-book stuff, or 'Marshall Law' animation, or Clive Barker's 'The Yattering And Jack', illustrated by John Bolton, the only place you're going to get to see it is Cool Beans World. The hardcore fans of that sort of stuff are very completist." But aren't they also fetishists? What advantages will an Internet channel have over its print competitors? "There will be a back catalogue of traditional-style comics, which you view side by side like the old, hard-to-get back issues," he continues. "That's just there to view, but where it really comes into its own is where we're doing animated comic books, where we're using technology to make things that you can't hold in your hand. The important thing with these is that we've got good comic-book people involved in them. Like with the 'Marshall Law' animation, we're keeping Kev O'Neill's artwork style intact, even though it's in CG. And with Bisley, we're keeping his style. He's down here every two weeks, talking to modelers and animators. So it's CG with a difference."

Ironically enough, by attracting these



As might be expected from a company started by a former *2000AD* artist, much of the work done by Cool Beans Productions has a dystopian feel to it





As they aren't working on in-game animations, the Cool Beans artists are free to use displacement rather than bumpmapping. "That is really handy for the figures in Saintly," notes Wayne Elliott, "as all the characters have varying degrees of scarring"

Simon Bisley: Doomkeeper

One of the artists working with the company to generate content for the Cool Beans World Web site is the prolific and oft-imitated **Simon Bisley**, whose work has graced a bewilderingly huge number of comic books and their covers, as well as videogame promotional art and film production work. 'Doomkeeper' is the painted and computer-animated tale of an ancient warrior.

How does this compare with your more traditional work?
There aren't any constraints at all with this. It's the first time I've really put so much of my input in to make the animation as close to my illustrations as possible. So it will be interesting to see the results.

How much further will you be taking your videogame work in the future?
Well, I've already done some work with Capcom, but what I do think will happen is that a lot of comic-strip artists and creators got put on the shelf when computers really began to take over. Computer programmers and the rest of them thought they could do without us, and I think they're beginning to realise that they can't. Well, they can, but they still need the artistic input. The only really decent thing to have come out in CG is 'Toy Story', and everything still looks very computer generated.

What implications does this project have for your other work?
I don't know. I think I've become more of a creative designer now, which is what I've always wanted to be anyway. I'll still get employed, I guess, with work on covers and stuff. Strangely enough, some magazines asked me to do a cover to look like a computer had done it, which was pretty odd. It looked bloody terrible, but it's all very new for everybody.



The studio's work on videogame titles like *Spider-Man* for Activision supports the company's own animated movies, such as 'Saintly' and 'Marshall Law' for the Cool Beans World Internet channel. It's not all doom and gloom, though, with Cartoonscape.com providing light relief









talented artists and writers with the enhanced storytelling offered by cutting-edge Silicon Graphics technology, the studio is also expanding the range of services that it can offer to clients from the videogame sector, as Nick explains: "If a company wants a more fleshed-out concept from a comic-book writer of the calibre of Pat Mills, we can offer those sorts of services. And as technology gets better and people are able to implement different visual styles in games, you'll eventually be able to recognise characters as looking like Bisley would draw a character, for example, with the anatomy how he would draw it, or with the textures like he would do them. I don't think it's quite there yet, but as the technology gets better you're going to get some very stylised games, where you'll actually be able to tell who's been involved in it – at the moment it's very generic in that sense."

Next-gen opportunities

Indeed, the arrival of next-generation console hardware has also precipitated a shift in the nature of the work done by the studio, which has seen a greater number of requests for in-game animations. "Now that next-generation technology has caught up we are finding that people are increasingly coming to us and saying that they need in-game characters animated, or in-game textures doing, purely because the consoles can cope with it. Companies are also outsourcing a lot more – teams are getting bigger, it's costing more to develop a game, and it's a big headache to try and go from teams of 12 or so to the 40 that would be required to do everything in-house. So it makes sense for people to outsource





Although Cool Beans concentrates on digital animation, the stylistic idiosyncrasies of individual artists are maintained, demonstrated by characters based on work done by Kev O'Neill on the 'Marshall Law' series



stuff like sound and animation."

But the opportunities for the studio go beyond the budgetary constraints of big publishers. "If episodic gaming really does take off, with interesting storylines and good characters, I think people will buy in to that. I think at this point it's difficult, because companies are having difficulties getting big-budget games out with two-year development cycles, so it could even come from the mod community. But it would be interesting to see if that is the future approach, because that's something that we as a company could very well exploit. We're always telling stories with our own characters, thinking very far ahead in terms of what will happen to the plot."

It may be a while before the company actually does add this range of services to its repertoire, but it seems serendipitous that it should, having come so far since that relatively speculative attempt to produce a videogame. But it would perhaps be doubly ironic if, at some point in the future, a Saintly videogame arrived on a console near you. Which, as Nick explains, isn't that unlikely a scenario: "Now that the technology's caught up, we've had some interest in Saintly as a games property. Although it's not top of our priorities at the moment, because there are so many other things we're doing with it, the other properties that we're developing would be perfect for games."

nuon

lights

The year 2000: while Sony, Sega, Nintendo, and Microsoft were embroiled in predictable new console hype, VM Labs sneaked a new gaming platform into the US market disguised as a DVD player. A little later than originally planned, **Edge** takes the company's intriguing Nuon for a spin

"It's very powerful, it's not limited to any one set of techniques, and it's cheap. Really, really cheap."

No, this isn't a description of a Russian streetwalker – this is how **Jeff Minter**, co-designer of the Nuon chip, summarises VM Labs' new product. According to the company's official press release, Nuon: "Enhances the passive elements of digital video products such as DVD players, digital set top boxes and digital satellite receivers, and transforms them into compelling interactive video entertainment systems."

Minter's definition is a little more revealing: "Basically, it's a very fast processor – it's what they call a VLIW processor, which stands for Very Long Instruction Word.



"Remember on old processors like the 68000, where each instruction used to take so many ticks? Then RISC came along, and RISC basically gave you one instruction per tick, but with a simpler set of instructions. What VLIW does is let you effectively launch more than one instruction per tick by allowing you to place different instructions on the different function units of the chip itself. You can place an instruction on the multiplier, one on the memory unit, and so on."

This essentially means a coder gets a very fast throughput of operations in a relatively low number of ticks. So, while the chip has what appears to be a slow clock speed, it can actually execute an impressive amount of instructions every 60th frame.

The last time **Edge** caught up with Minter for a substantial chat was at ECTS in1999, where he was promoting the virtues of Nuon. Prior to that, he had been responsible for the Jaguar's most convincing slice of playability: *Tempest 2000*. So, how has he found the move from working exclusively with software to also being involved with hardware at VM Labs?

"It has been very interesting," says Minter. "When I left Atari I had a couple of other sort of more mainstream software houses that were after me, and I could have gone to them, I suppose. But I'd never been involved in the design of a chip before, so that was very interesting to me. Also, I knew a bunch of the guys at VM – I was employee number seven at VM Labs, so I knew everybody there, and it just intrigued me. They explained about the idea and what they were trying to do, and I thought it would be quite nice to see this thing through from concept

The Samsung offers joypad ports on its front (right) but their positioning is entirely at the player manufacturer's discretion. Round the back, the usual DVD output arrangement – component replaces SCART in the US

"When I left Atari I had a couple of mainstream software houses after me, and I suppose I could have gone to them, but I'd never been involved in the design of a chip before, so that interested me"

to silicon – that was very satisfying; when you've been working on the ideas in software for a couple of years and you finally get the silicon back, and it's an actual chip that works."

However, **Edge**'s current interest in Minter is more than a respect for his considerable videogame-related achievements. Having worked so closely on the Nuon architecture, it only seemed natural to take his involvement a step further and develop software for this new venture.

"The boys at VM Labs were very taken with VLM [Virtual Light Machine, which generated a light show based on input from a music CD] on the Jaguar – they liked the whole concept of VLM – and that was important to me because that's work that I've been doing off and on since 1984," he explains. "Also, it was important to me to get VLM out there as a commercial product – get it out to a lot of homes. Again, the Trojan Horse thing: that people have this DVD player, and when they play a normal CD this thing will pop up that they've never seen before. A lot of people will like that."

This is very revealing of what the philosophy behind Nuon is. It categorically isn't an attempt to muscle in on the volatile console market.

"The Nuon chip costs roughly the same as a hardwired MPEG2 decoder, so what we want to convince the DVD manufacturers of is that they might as well use a Nuon chip for all the extra capabilities that it has, but it doesn't really effectively cost them much more than just using a hardwired chip that does nothing but MPEG2 decoding," reasons Minter.

Presumably Toshiba and Samsung were suitably convinced, because last year the two manufacturers each released a Nuon-equipped DVD player, the SD2300 and Extiva N-2000 respectively. Priced at $400 (£270) and $500 (£340), the players are aimed at the middle range of the market, but even just after a few months, a demographic-altering move is already in progress:

"We'd like to see the Nuon chip in all kinds of DVD players, not just high-end but low-end as well – there's a DVD player coming out in the States which will be sub-$200 with the Nuon chip in it," Minter reveals.

"I don't know the current state of the market, but in Europe last year Samsung and Toshiba were the two highest-selling manufacturers of DVD players, and Samsung and Toshiba are going to be using them with the Nuon chip. So the way that more chips are going to get out there is not because people are going to buy them for games, it's just going to be in their DVD players because it's a better solution for MPEG2 decoding than anything else, and is one of the most cost-effective chips to make a DVD player with."

The choice is yours

Toshiba's SD2300 Nuon player. Coming to a store near you?



The current options for potential Nuon players are rather limited, with just two US models available at the time of writing. Others are on their way, of course, but for now this is your lot. The Toshiba SD2300 includes a 10bit 27MHz Video DAC with high-resolution filter, a 16x zoom function, virtual surround sound, very smooth forward/reverse options, and just eight VLM effects. The Samsung, on the other hand, matches the SD2300's DAC and forward/reverse attributes, offers seamless panning, a 20x zoom, comes with a Samsung-branded Warrior pad, and 100 VLM effects. Both companies are expected to announce European versions of their respective US Nuon-equipped DVD players in the very near future, with other manufacturers set to follow suit throughout the rest of 2001. Pricing has yet to be set, although **Edge** expects the initial units to cost around the £300 mark.

Pad-O-Matic

From top: the Pro-Elite (reversible for left-handed play), Stealth, and Warrior joypads

Although it's possible to play using the DVD player's remote control, **Edge**'s Nuon player thankfully came with a Warrior joypad. Lacking the analogue control of its HPI-developed brethren, its digital nature was enough to progress through *T3K* with, though naturally other games could suffer more in terms of playability. Made of remarkably rigid plastic, the design proved a little tiring, with cramps becoming a nuisance after prolonged play. Unfortunately, **Edge** was unable to test the other two models. But all three designs share the six fascia and two shoulder button configuration, a Start and Nuon (useful for letting your player know it's time to load the game) button, and three metres of cable. In addition, the Stealth includes an N64-style Z trigger, while the Pro-Elite ignores this but instead packs a memory card slot for 1-4Mb units and is primarily designed with the LCD memory card in mind, interestingly similar to the feature found on a DC pad. Logitech is expected to release its own model soon.

This is what Minter means when he talks of the Trojan Horse effect. While videogame consoles still have a little road to travel before claiming a consumer majority, the penetration of video reproduction units has historically enjoyed a far more widespread and successful model. After a shy start, the uptake of DVD in Japan, the US, and the UK has been phenomenal. As far as the average Joe is concerned, Nuon's gaming and visual-effects abilities, as Minter, perhaps overharshly, describes as just 'good extras'. But that's not to say he lacks vision for the product he helped create – this is, after all, part of the plan: "Give it a couple of years and hopefully the chip will start to get fairly ubiquitous, and then we'll have enormous market penetration for the games."

Three gaming titles currently exist in the US for Nuon. And while there are some ten more on their way, only one is genuinely compelling: *Tempest 3000* (see review on p72). This also happens to be Minter's latest appearance on the videogaming circuit. Coded and designed solely by the bearded recluse himself in his characteristic, secluded Welsh residence over the past two to three years, it is perhaps a better indication of Nuon's power than the title's Nuon-supported stablemates, which so far have suffered accusations of not looking any more graphically impressive than a PlayStation or Nintendo 64 title.

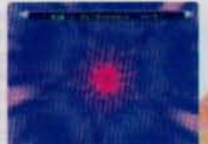
This, Minter argues, is a direct result of Nuon game developers' over reliance on the software libraries available to them. "If people normally think *Tempest* looks better than [the other Nuon games], it's because I made my own renderers. I was working close to the machine," he says matter of factly. "I'm still prepared to do that. I will always be prepared to do that. I think understanding the machine you're working on at its deepest level is an essential part of being able to produce top-gear stuff on that machine.

"Earlier and current generations of consoles have certain techniques which are hardwired into silicon. Effectively, you have co-processors that accelerate certain functions," he observes. "That's very good, it works very well as long as all you want to do is execute those functions. No matter how many polygons per second the system can render, where the polygon engine is hardwired you can't actually divert the power that's in that polygon engine into doing something different. Whereas with Nuon, because you're not hardwired to any one thing, you effectively write your own co-processors and it means you're totally flexible in your choice of techniques – you can explore different kinds of renderers if what you want isn't on the library. If you've got the guts to do it, then you can actually

Virtual Light Machine

Colourful, manic, and beautifully mystifying – Nuon's VLM effects in action mode (below)

Originally developed by Minter in 1995 for the Jaguar CD, VLM reacts to music being played from a CD, and alters its appearance accordingly. 3DO owners may remember their machine doing a similar thing (even if it lacked the vigour, colourful nature, and overall panache of Minter's creation, stubbornly refusing to enter the psychedelic realm with the same conviction and oddly preferring to stick to brown and mustard green hues). The PAL versions of Nuon will include 52 extra VLM effects, which Minter is currently coding, and just like their NTSC counterparts the resulting experience is likely to be just as magnetically enthralling. Additionally, you can interact with the effects (provided you have an analogue pad) as well as – if all goes to plan – be able to make your own effects and save them on to memory card.

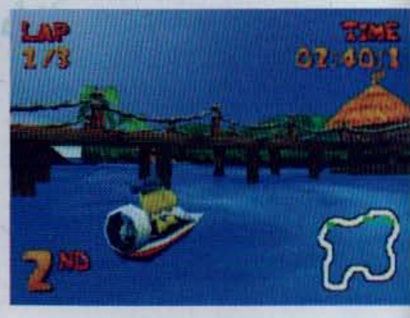


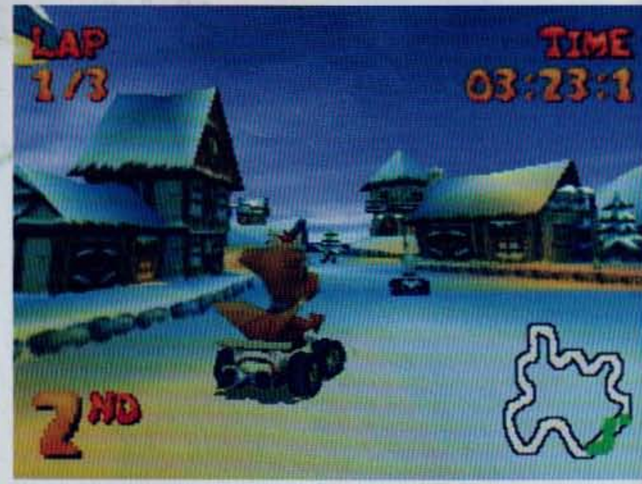
New on Nuon

Take *Tempest 3000* away and the initial batch of Nuon titles doesn't look too enticing. From left: *Iron Soldier 3* (Eclipse Software): 40-foot-high robots battle each other with big guns over 25 missions; *Merlin Racing* (Miracle Design): *Mario Kart* ripoff with karts, swamp boats, hover crafts and 25 tracks; *Freefall 3050AD* (TAKS Ltd): as a futuristic cop, blast criminals while freefalling your way through 15 levels; *Myst* (Cyan Inc): the non-gamer's favourite; and *Amaze* (Fungus Amungus): classic puzzler where wooden board is manipulated to guide steel ball to goal, avoiding the wholes. Of these, currently only *Freefall 3050AD*, *Merlin Racing* and *T3K* are have been released on the US market. Other games to have been announced at the time of writing include *Monopoly*, *The Game of Life*, and *Breakout* from Hasbro, together with *RC de Go!*, *Bust-A-Move*, and *Space Invaders 2001* courtesy of Taito. And Nuon-enhanced DVD films are also on their way: 20th Century Fox is first of the blocks with 'Bedazzled' (2000), due out in the US on March 13.







sit there and code up whatever you want, design your own renderers."

Which, of course, is exactly what he did. "When we got the chip back, although there were libraries for doing standard stuff, I had a very definite idea about the aesthetic of *Tempest 3000*," he says, "so I had to work out a techniques which I couldn't find in text books – maybe there are somewhere, but [not] with regard to implementing them on the specific architecture of the Nuon. It was quite difficult – some of the most tricky assembly language programming I've ever done. And it took quite a long time to actually get the renderers together. The bulk of that game is in assembler, it's only the outer layer that's written in C, and that's actually the first C code I've ever written. I've been so much of an assembler programmer for years that I've never had to use C. But C is easy; actually defining the renderers and getting them right took a long time."

Nuon is expected to appear in DVD players available in Europe around March, with Samsung and Toshiba once again leading their rivals. Prices are as yet unconfirmed, although it looks unlikely that the first batch of machines incorporating the chip will be priced below the £300 mark. Minter is busy reworking the VLM effect editor to be more efficient (as well as implementing 55 new effects for the EU version), and hopes to include an option for Nuon users to create their own effects and save them on to a memory card – just another indication of Nuon's multitasking entertainment capacity.

Ultimately, **Edge** wouldn't try to convince you that Nuon is a viable gaming platform. And neither would its manufacturer, for that matter. It's a clever piece of electronic-entertainment hardware, but very much in the broader sense of the term. You can use it to play games, of course, especially if more examples of *Tempest 3000*'s calibre show up. But the unit's primary use would be elsewhere. If Minter is right, market penetration could be phenomenal. On DVD playback alone, it deserves to do well. Of course, there's always the potential bonus of playing host to another outstanding example of videogaming. If that should ever happen again, **Edge** will take a look at it.

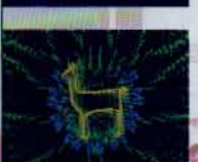
Nuon on test

As close to a starting sequence as it gets: the Nuon logo follows Samsung's own









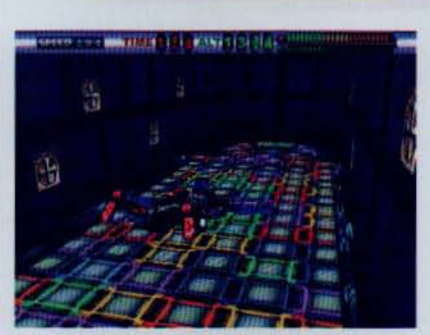
Unable to purchase its own unit from the US (don't ask), **Edge** asked Jeff Minter if he would allow his Nuon to spend some time in England for the purposes of this feature. Some two hours later the N-2000, a shrink-wrapped copy of *Tempest 3000*, and a Nuon joypad safely made the trip back to the **Edge** office.

There's an undeniable air of understated confidence emanating from the Samsung unit, despite how awkward it looks alongside gaming consoles old and new. Switch it on, and for all intents and purposes it's another DVD player. Except it isn't, of course. True, the machine's playback ability is commendable and of a high quality throughout – contrast levels are good, while colour separation and stability is also impressive – but it's not noticeably better than a decent mid- to high-end range, normal MPEG2-decoding machine. Touch any of the buttons either side of the 'play' function, and Nuon's box of tricks springs into life. There's extra-smooth (by normal DVD standards) scanning in both the forward and reverse fields, for instance. Or the ability to alter the Gamma scale, enabling you to witness detail that had previously been obscured by darkness. But neither of these are as impressive as the powerful zoom function, which allows you to select a portion of the screen and massively expand it.

However, **Edge**'s primary interest in Nuon is obviously as a provider of electronic entertainment in general, and, in this case, *Tempest 3000* in particular. Load up the disc and the Nuon logo fills the screen for a few seconds, until the main menu appears. The game looks unlike anything currently available, and while it naturally shares some genetic material with Minter's previously developed *Tempest* instalment, its appearance and overall design ensure a distinctive experience.

But the look of *Tempest 3000*, with all of its hypnotic visual trickery, is more than just the result of Minter's hard work. It's also an indication of what is perhaps Nuon's most apparent advantage over traditional consoles. In addition to handling several sets of instructions per cycle, embedded in the Nuon design are various layers of parallelers with the purpose of making massive number crunching a reality, according to Minter. What this then enables a developer to do is to: "Do quite a lot of maths for every pixel on the screen." If the developer in question is Minter, then you can expect this to translate into the smoothing, translucency, and antialiasing techniques so common in *Tempest 3000*. (Realtime ray tracing is also achievable, though not implemented in *Tempest 3000*.) Not only is this freedom key in differentiating the Nuon architecture, but Minter is also convinced it's the way all processors will eventually go.



















All too real?

Motion capture revolutionised animation, but as technology has progressed so the processes that breath life in to in-game characters have become increasingly sophisticated. **Edge** reviews the current situation in the field, and talks to animators about the next big leap forwards – R-TAG

Videogames are currently populated by the walking dead – and that doesn't just apply to survival horror. While present technology may be able to produce striking representations of the human form, in terms of animation and facial kinematics a rigor mortis seems to have set in which no amount of polygonal make-up can mask. Back in issue 24 **Edge** examined motion capture (MoCap), and creatives enthused that it was the great hope for the future. Images of men wearing leotards adorned with golf balls were plentiful. Half a decade on the reflective markers may have increased and the movement may be smoother, but the dissatisfaction felt by designers with this technique is palpable.

"I just get a bit annoyed when I hear people saying that motion capture is the way forward for game animation," states **Toby Gard**, currently working on Confounding Factor's *Galleon*. "It reminds me a little bit of rotoscoping in traditional animation; it's quick, easy, and reasonable results can be achieved without the need for artistic sensibilities. However, I think the results are never as satisfying as traditionally produced hand-animated movement. Through exaggeration stronger results can be







Team Soho's MoCap data is gathered using the versatile optical system. Because the actors are free from restrictive wires (used in magnetic systems) they can move more freely and perform in larger groups

achieved that work on a more direct level of communication than simply mimicking normal movement."

Problems with MoCap

Motion capture is still widely used in the industry, with data gathered from two sources: magnetic and optical. Magnetic methods involve wires connecting sensors to key locations of the body. Optical techniques transmit data from reflective sensors to motion-tracking cameras. But each has major sticking points. **Gavin Moore**, senior animator at Sony's Soho Studio, is using MoCap for *The Getaway* and outlines the potential problems: "The optical method can have a larger capture area, but suffers from occlusion and also the problem of markers coming off during capture sessions. Our actors found the optical system constricting, fearing that the markers would fall off and thus affecting their performance. Occlusion occurs when the marker cannot be seen by the cameras. Magnetic systems do not suffer from occlusion, but the capture area is smaller. The sensors are clipped on to the suit and take some effort to dislodge, which gave our actors more freedom during their performances."

Stylistically, *Galleon* is a world away from the grittily realistic urban setting of *The Getaway*, but it simply isn't practical for animators working on games with casts of hundreds to hand animate every character. While sublime results can be obtained through Disney-style exaggeration, other projects are more suited to sessions spent in the MoCap studio. As Gard acknowledges: "I am not saying that motion capture is pointless. In fact, it's clearly the best option for simulation-style games. I just think there should be a distinction drawn between realistic and believable, because, overall, I reckon you can get more believable results through hand animation."

> "I am not saying that motion capture is pointless. In fact, it's clearly the best option for simulation-style games. I just think there should be a distinction drawn between realistic and believable"

Gard's penchant for a more stylised form of animation may suit *Galleon*'s look perfectly, but developing complete animation routines without the use of MoCap is daunting and relies heavily on the expertise of the individual animator.

Elixir's senior animator, **Matthew Everitt**, agrees: "If you say that MoCap is outdated, then so is the job of the animator, which has basically been the same since the old boys at Disney set the ground rules. Character animators are always trying to achieve the same end result – creating a dynamic, appealing character." It is not the quality of the MoCap data or the lack of vision which is holding back animation, but the tools animators are given to use. Faced with strict deadlines and little time to create unique methods, developers are naturally falling back on techniques which have proved reliable in the past.

New tools required

3D Studio Max and *Maya* can provide the framework for great animations, but the spontaneity missing from many games requires uniquely developed tools. Moore sees the blending of in-house developed technology with existing packages as the way forward. Indeed, *The Getaway* would not have been conceivable had Sony decided to rely solely upon existing technologies. "We have really tried to either invent or acquire new technologies to make this happen," says Moore. "We work very closely with a number of companies to achieve this – the way we do our MoCap, our own Talking Heads tools, the scanning of our characters. We have learnt a tremendous amount and have set new heights in character realism."

Sony's Talking Heads technology is particularly striking. The system incorporates parsed speech and a skeletal animation system to reduce the workload involved in creating facial animation on a large scale. It is split into three segments: emotional, speech, and 'specials'. Once the face has been scanned and placed over the Talking Heads mesh,







Confounding Factor's *Galleon* is set in a fantastical world and has enabled Gard to apply a much more exaggerated style to express both movement and emotion. The hand-drawn approach may bring subtleties to the animations which can not be captured by camera but relies heavily on the talents of the artists and animators



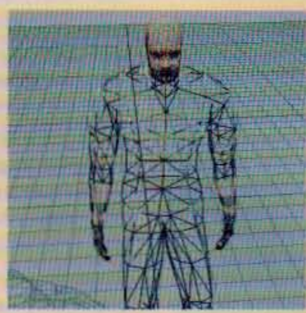

Many of the 'human' characters in *Project Eden* morph into mutant creatures. The team is particularly proud of their blending routines, which allow the main characters to turn and shoot simultaneously

emotion values can be entered. These range from joy through to disgust. Type in a value from one to ten and the face will mimic the emotion. Speech is then added by taking the .wav file from the motion-capture session (where the scene has been acted out) and matching it with a text file. The lips will sync both to the emotion value and video footage from the MoCap shoot. Special animations include blink rates and head movements which depend upon the emotion values which have been previously set. Though Talking Heads is currently being used solely for cutscenes, Moore foresees future in-game action embracing such technology: "As far as facial animation goes, we are not that far away from characters reacting realtime to your actions – things like laughing when you do something stupid, or cowering in fear when you become aggressive. Each character would have a personality and react accordingly."

Many development teams have, of course, been refining their animation procedures across a number of projects. Interestingly, the animation-linking system developed for Lara's first gymnastic leaps and somersaults provided the stimulus for other Core Design games. "The technology we are using in *Project Eden* was started from scratch," says the game's artist/animator, **Stuart Atkinson**. "But we have evolved some of the technology we created during *Tomb Raider* and *Tomb Raider II* – it would be silly not to. The animation-linking system we used in *Tomb Raider* proved very powerful, so we took the basic idea and expanded on it. It gave the animator the power to say when and how the animations will flow together during gameplay. The advance we made was to allow these links to be generated for us on the fly. Since the links are generally between four and six frames they don't require any actual animation, they just need to exist, and you can imagine how much time this saved the animator. If the animator feels that a particular link needs to be done by hand, then he can still do this."

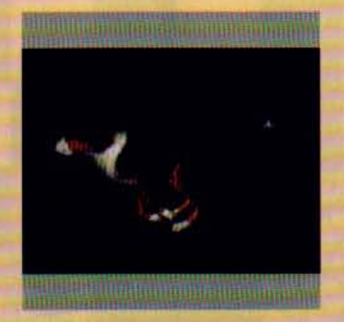
Convincing behaviour

Crucially, what is missing from gameworlds are characters who can respond more believably to their surroundings. The streets of *Shenmue*'s Yamanose may have been rendered with meticulous care, but they were populated by ghosts.




The animations in Core's *Project Eden* are created using *3DS Max* with straightforward key framing. It is the sophisticated blending routines coded after these frames are created which give the game its dynamism





The frames of animation in *Dog's Tale* are created in traditional fashion in *3D Studio Max*. But it is R-TAG's ability to blend from one frame to another in realtime which saves time. The system reduces 'twitching' and allows technicians the time to create more subtle effects such as limping and secondary animations

The player's presence was not acknowledged until the first rule of RPG gaming was enacted: stand near to an NPC and press the action button. The sad truth is that NPCs in all gameworlds tend to react to the player in one of two ways: complete ignorance or direct hostility. A greater emphasis on animation blending, like that used at Core, is only one solution. Developers need sophisticated methods of implementing animation in realtime which go beyond simple inverse-kinematic routines.

David Braben, frustrated by the limitations of traditional forms of animation, decided to find his own solution to the deficiencies he saw in pre-canned animation. Developed over two years, Frontier Development's R-TAG (Real-Time Animation for Games) is the closest step towards true non-linear animation **Edge** has seen. "We were aware of the problems with prerendered animations and how to get in-game animations to a similar level," begins Braben. "In theory this is very easy – most games do it already – but they are doing little more than playing a sequence generated beforehand (by motion capture or from scratch). This does not work well except on flat surfaces, and has to have many different transition sequences for turning, changing speed, crouching, and so on. These all take up a great deal of memory when compressed."

In practical terms, realtime animation systems such as R-TAG will bring a greater degree of subtlety to games. A character's animation will alter depending on many variables in the game. "Because the animations are being done in realtime, we can blend several inputs together to show tiredness, limps, general damage, even anger," says Braben. "This takes far less animator time (and memory) and it allows the animators to spend their time on creating secondary animations for things like clothing and hair. This memory saving is very important on platforms like PlayStation2, as it can be freed up for gameplay code."

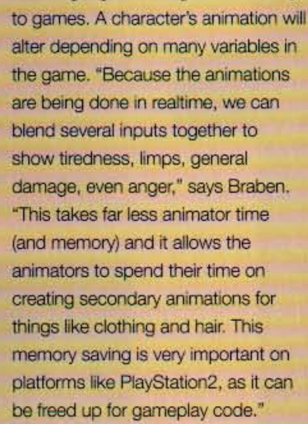
"It would be nice for other developers to adopt R-TAG, but even if they just go away with some of the principles and techniques, then we should see a leap in the quality and believability of animation in games"

The team is clearly excited by the possibilities of R-TAG and what it can bring to the development community. Emotional content is the end goal, but, almost instantly, Frontier expects game animation to improve in more subtle ways. "[The animation in] *Perfect Dark* was terribly predictable and repetitive. We just have to do better than these railroaded stories," points out Frontier's head of studio, **James Dixon**. "It would be nice for other developers to adopt and probably improve R-TAG, but even if they just go away with some of the principles and techniques, then we should see a leap in the quality, and, more importantly, believability of animation in games."

Pushing the Frontier

Frontier-developed games have predominantly focused on alien environments populated with unusual creatures. The bugs in *V2000* used the first instance of R-TAG. Individual legs had to be moved through an arc using inverse kinematics (whereby the joints are set up as points which the animator uses to control movement) to make sure they were planting convincingly. "We didn't realise it at the time, but they had also sowed the seeds for the R-TAG approach to animating more difficult creatures," explains Frontier's technical director, **Jonathan Roach**. "In '99 we decided to prepare a demonstrator for a game involving a dog as the central character. We needed something up and running quickly, so we revisited the *V2000* leg code to adapt it for a dog."

The difficulties in animating quadrupeds have proved incredibly challenging, and the process of putting R-TAG together has been far from smooth. "It has proved a much harder nut to crack than we first thought, but now we're there it is very satisfying to have," adds Roach. "We have achieved a great deal, but at a cost in artistic design. Our

The movement of all the creatures in the *Dog's Tale* world is exquisite. Walk by another animal and its eyes and then head will follow you; pester it for a while and it will playfully chase you around the landscape



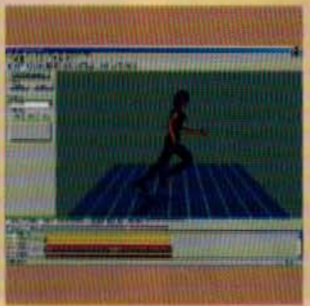
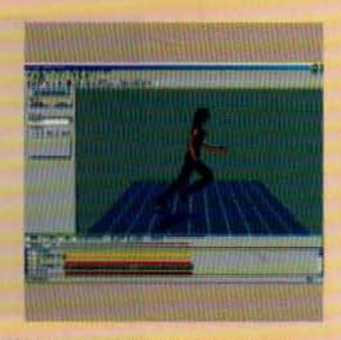

These character renders give a small insight into the world that will eventually blossom into *Elite IV*. R-TAG's interface enables animators to work on secondary movements such as clothing and hair

current work is focusing on improving the workflow – making the designers' jobs much easier. The previous revision had its own tool to design the animations. Although our artists have achieved some remarkable results with this, it was very hard to get them this good. We stood back and looked at the best way to prepare the artistic side of R-TAG animations, and concluded that using off-the-shelf tools such as *3D Studio Max* was the way forward."

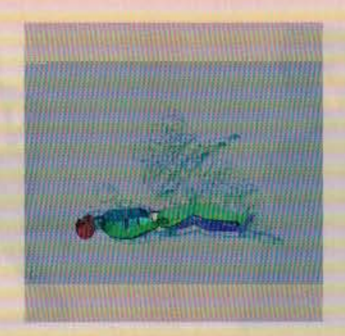
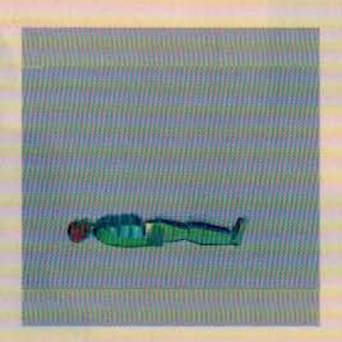
The first game to take full advantage of R-TAG will be *Dog's Tale* – a game which is midway through its development cycle. It is clearly targeted at a younger audience, but the technology involved is impressive. Control is incredibly responsive, with turns being performed mid-stride, and with none of the characteristic twitching which often occurs when every frame has been meticulously rendered, but not blended well. There is also an unprecedented fluidity of movement over undulating surfaces, and, crucially, other animals respond to the presence of the dog with subtlety and refinement.

Now that R-TAG has successfully brought quadrupeds to life, the team is confident that bipeds will present fewer challenges. Frontier is currently animating humanoids for *Elite IV*. "With a person, the task is much easier," explains Roach. "All gaits are left-right-left-right. The main advantage is the designer doesn't need to worry about ensuring the movement matches the limb motions of a particular character. There is no need for special animations for turning, stopping, and starting. The net result is a smoother-operating game with fewer animations, and hence quicker game development."

Though Braben is still coy about certain aspects of *Elite IV*, the addition of realtime animated characters in the game provokes speculation that *Elite IV* will be taking on a human aspect. Entering space stations and interacting with the many characters Frontier is designing seems assured. The title's online functionality also hints at wonderful possibilities, and 3Q's data-scanning techniques (see 'Bringing characters to life') will provide gamers with the opportunity of entering the *Elite* universe and recognising friends by looks alone. In an environment enlivened by R-TAG, the discerning gamer will immediately notice the difference. "We want to put the chemistry back into games," enthuses **Jonny Watts**,

R-TAG's interface has been tweaked over a period of time to make the process of adding key changes to the movement easier for the animator. The package will be licensed to selected developers very soon

Elixir's *Republic: The Revolution* will have a cast of hundreds. A huge list of animations have been created and split into character sets, such as military and business. These are then broken down into passive and aggressive states. 'Onion skinning' will be used to give the effect of motion slowing when bullets hit flesh

Frontier's head of production. "If a player walks through a crowd of people, they will react. Eyes will follow the player, heads will turn. There will be a greater degree of subtlety in the way people react to your actions. The perfect gameplay environment can now be created."

"We want to put the chemistry back into games. If a player walks through a crowd of people, they will react. There will be a greater degree of subtlety in the way people react to your actions"

Team Soho also sees animations in realtime as the Holy Grail for future game content. It will be interesting to see if their first steps in this area are successful. "We are working on integrating [our animation] system realtime into *The Getaway*," claims Moore. "This allows our characters to react to the player's actions. The pedestrians will scream and show fear when you pull out your gun. They will cry out in pain when hit by your car." And in the future? "The next step is to have dynamics-based animation systems. Characters will have built-in collision and inverse kinematic systems. When this happens the character will really be able to react to his or her environment. When they get shot, the animation will crumple and fall according to their surroundings. You could run through a crowd of people and push and jostle your way to the other side, each person causing a knock-on effect, like a wave – your run animation altering realtime as you yourself are pushed around."

A worthwhile effort

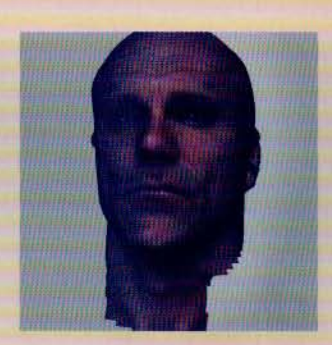
Such research and experimentation into realtime animation is admirable. The first fruits of such labours will be subtle, but that effort is being expended in this area is a positive sign. "We wouldn't have developed the system if we didn't feel it was going to bring something great to our games," states Dixon. "The principles behind it all are extremely exciting, and have implications which will affect the whole industry and the way in which it approaches animation, storytelling, and direction in games."

They do indicate the first steps towards unified behavioural animation systems, which will incorporate AI with animation to bring impressive levels of spontaneity to games.

Richard Spohrer, product director at SoftImage, believes that such systems will usher in the fourth generation of animation technology. SoftImage XSI is already delivering the tools to animators to produce more dynamic cutscene animation. "The third generation of animation systems are non-linear," explains Spohrer. "The fourth generation will be behavioural. This is the process of adding a level of intelligence to your animated content. At the most simplistic level it could be something like a crowd simulation or flocking behaviour. We are looking at the process at a much deeper level. I have no doubt that behavioural animation will be a major factor in the next 12 to 24 months."

Though XSI is mainly used for cutscenes, the techniques being built into the next installment of the package could point the way forward for game content both in realtime and in cutscenes.

It is indisputable that realtime animation will become a major force in games over the next few years, but, like early motion capture, the results are likely to be sketchy until designers realise the full potential such techniques can bring. And where time is saved due to sophisticated blending techniques and user-friendly interfaces, much effort will need to be expended on creating scenarios which can take full advantage of the processes involved. While the animator will be granted more time to explore his creative side, the humble coder may see his workload increase tenfold.





Talking Heads is a complete system which incorporates facial scanning, animation, and speech. A 4,000-polygon model will be used for extreme close-ups in cut-scenes with the amount coming down to 1,500, including tongue, teeth, eyelashes, and hair for the game. Each character is voiced and acted by the same person

Bringing characters to life

Though many artists have already generated incredible likenesses of the human face, the animation of individual features has proved troublesome. If developers are to wring tears out of Sony's Emotion Engine, then tools have to be created to elevate facial animation above that of a ventriloquist's dummy.

Facial capture technology, including that of 3Q, Digimask, and Cyberextruder, may provide the raw data but it still requires developers to use it effectively. **Colin Wren**, lead artist at Digimask, points out the hardships involved: "It's so difficult to actually pull it off, because if you go down the route of providing photorealistic images, then any aspect which falls even a tiny bit short looks obvious."

Digimask scans in a photo and produces an image made up of 6,500 polygons in three minutes. There are 55 influence points across the face which can be manipulated to simulate speech and emotion. Further adaptations to eye movements and expressions can then be made by animators. The technology is already being used by Evolution Studios for driver facial expressions in *World Rally Championship 2001*, and Elixir is using the system for its cast of hundreds in *Republic: The Revolution*.

3Q is also a notable exponent of such technology, and can scan an image of the full body into a game. Indeed, booths in US branches of Babbages offer the service for a small fee. Although predominantly used for FPS titles, **David Braben** is using 3Q's scanning technology for his current projects. 3Q also offers a novel solution to the problem of lip synching. "An actor is scanned saying their lines," explains Braben. "There is a microphone in the booth to capture the speech. This 3D data is then processed into a sequence of 3D models at the chosen capture rate. This can then be imported into a developer's own system, or with a further level of processing, into R-TAG where the animation components are extracted."

It is clear that a strong emotional connection will not be made with game characters until facial animation improves. But Braben predicts a more remarkable future for such technology. "Ultimately, we expect to have devices in the home that can capture and stream animations directly in to games, so that when you shout and gesture to someone in a game, your game character does the same shouting and gesturing."

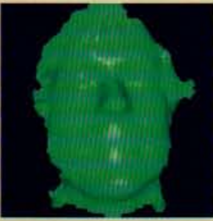








3Q and Frontier are working in partnership to bring R-TAG and facial scanning together. 3Q booths will be arriving on these shores later this year



The medical profession originally used 3Q technology to reconstruct faces after disfiguring accidents. In a peculiar twist, gamers can now distort their images and even add blemishes and scars



Edge's review policy

Every issue, **Edge** evaluates the best, most interesting, hyped, innovative or promising games on a scale of ten, where five naturally represents the middle value. **Edge**'s rating system is fair, progressive and balanced. An average game deserves an average mark – not, as many believe, seven out of ten. Broadly speaking, scores correspond to the following sentiments: one: disastrous, two: appalling, three: severely flawed, four: disappointing, five: average, six: competent, seven: distinguished, eight: excellent, nine: astounding, ten: revolutionary.

Videogames on the **Edge**

Titles slowing productivity this month

Tempest 3000

After playing this insanely addictive lesson in playability for way too long, **Edge** had to return Jeff Minter's Nuon, leaving severe withdrawal symptoms.



(Nuon) Hasbro

Street Fighter II Championship Edition

A JAMMA board means arcade perfection, right down to the dodgy, hacked, mid-air hurricane kicks and angled fireballs. New ROM chips are on their way.



(coin-op) Capcom

Gran Turismo 2

The arrival of the *GT3* demo in **Edge**'s office this month prompted certain team members to dust off their copies of *GT2* to refine their driving skills.



(PS) SCEE

TimeSplitters

The initial feeling that Free Radical's FPS is a hollow experience is soon overturned when you find yourself having just one more go at 4 o'clock in the morning.



(PS2) Eidos

Pay attention

Keeping you coming back

Shadow Of Memories is a complex, multi-ending adventure game, which, rather than clamouring for attention via shock tactics and violence, makes a bid for your attention with stunning atmospherics and a cleverly threaded plotline. It fails. Conversely, *Phantasy Star Online* (below) makes only a vague attempt at a coherent story, offers an utterly linear blast 'em all experience, and an abhorrent oneplayer mode, and is easily one of the best games **Edge** has played in the last 12 months.

Experience both, and it's clear why. *Phantasy Star Online* might have a deficient oneplayer structure, but *Shadow Of Memories* barely has one at all, preferring to rely on its strong narrative to carry the game through to its five different conclusions. It's a noble idea – the gaming world's most recent attempt on the life of the novel, if you will – but it doesn't work. Why? Because as charming as Konami's clever threadweaving is, it's not fun. We play games expecting interaction, and though *Shadow Of Memories* allows us that privilege, it does so only on a limited scale. It's still essentially a book. It's a Choose Your Own Adventure, except we're never made aware of that when we're allowed to turn the page.

Play *Phantasy Star Online* 1,000 times, and your second mission will always be the same, regardless of your progress in the first. You can't choose your own adventure, but you can choose your comrades, and that's enough to transform each game. It's genius, almost infinitely satisfying, but it's not something limited to multiplayer. The hyper-principled *Deus Ex* may hammer home its anarcho-choice structure with limpet mines and judicious use of the sniper rifle, but it's not the death that makes it special: it's knowing that each death could matter. It has only four different conclusions – one less than *Shadow Of Memories* – but each game feels different, and the player is always aware they're making crucial decisions. The final scripted memorial to your path is an irrelevance next to the memory of the thousands of choices preceding it.

That's how it has always been. *Tetris* rockets, *Mario Kart* tickertape, *PaRappa* concerts: celebratory moments all, but they're not why the games are so well regarded. Multiple endings are a bonus, not a replacement for a solid game dynamic, and that's why *Phantasy Star Online* succeeds and *Shadow Of Memories* fails. Five resolutions may force gamers to revisit a game five times, but coding the gaming equivalent of crack will hold their attention forever.













Phantasy Star Online

Format: **Dreamcast** Publisher: **Sega** Developer: **In-house (Sonic Team)** Price: **£40** Release: **Out now**









Before embarking on an adventure, it's wise to take a trip around town to stock up on supplies. Visiting the Hunters Guild will allow access to a variety of subquests

It looks heavenly from the images, but when people have such high expectations from a game, it's easy to be suckered into believing something's there when it's not. Consume the rumours and predictions across the Internet and you'll find it's a socially acceptable *EverQuest*, or it's *Diablo II* in full 3D, or it's what happens when marshmallow J-pop meets Dungeons & Dragons. There's some truth in all of these assertions, but in reality *Phantasy Star Online* stands alone thanks to its elegant interpretation of Naka-san's one-world vision, and the hypnotic atmosphere that comes attached. It deserves better than to be described as a corruption or advancement of an existing title: this is something new, and it feels like an epiphany.

The fairytale begins with the creation of a character: you dress them in vivid pastel shades and then stretch them into shape. This is astonishingly configurable, especially given the limitations of the host system, and enables you to pick an attractive near-unique online identity for whoever you're choosing to be. **Edge**, assuming the guise of a giant metal robot and the personality of record label Digital Hardcore's Alec Empire, slips into role and slips away. Connect to *Phantasy Star Online* and it's like closing your eyes and appearing in someone else's dream.

Open them again, and you're still there, and so are the others. They appear slowly at first, like your vision's taking time to adjust to Naka-san's sugarcoated future – then there's one, five, ten of them, fizzing into view as the Dreamcast loads their hazily sweet imagery. They're playing on a different continent, or just up the road, but now they're here, and they're talking to you via one of *PSO*'s three dialogue systems. Wander around each lobby and you'll find clusters of transcontinental conversations. "Hello > Alec Empire" says a Japanese guy. "Do you want to go on an adventure?"

Who wouldn't? Still, behind all the talk lies a structure less revolutionary: kill all the monsters on a level, and move to the



Using *PSO*'s close-combat weapons means you inflict more damage on opponents, but leave yourself open to attack. Beginners may wish to buy a pistol and take shots at enemies from a distance

next. Without a strafe or Z-lock, the combat is more *Gauntlet* than *Zelda*. In fact, it cheapens the game to such an extent that the action is quickly boring in oneplayer mode – run away, turn, fire, run away, turn, fire – and provides little longterm interest. But why should anyone expect it to? The game is titled *Phantasy Star Online* for a reason, and those ignoring this will be disappointed by the endless repetition.

Connect, though, and suddenly the combat dynamic falls into place. Those with guns provide cover for those using bladed weapons, the casters providing healing and attacking reinforcement for both. Different team combinations bring different gameplans, experienced players help the weak, and items are divided fairly amongst the fighters. Naka-san's hopes that players would fall out over stronger weapons don't seem to have materialised, as *PSO* is essentially a co-operative game and you'll be hard pressed to find a friendlier online community. Everyone watches each other's backs. Everyone smiles when the dragon gets slayed. "Congratulations! > Alec Empire," says the Japanese guy. Thanks. You too.

It's genuinely rare that a game both excels and innovates to this extent while remaining effortlessly simple. Some will curse that simplicity, declare the game as too straightforward or the storyline overly linear. They're missing the point. Atmospherically, *Phantasy Star Online* is absolutely without rival, and that's what it makes it unmissable. Those who prayed for safe passage for Naka-san's vision can rest easy, because this is a bewitching world fired with stunning creativity. More simply, it's a dream.

> Without a strafe or Z-lock, the combat is more *Gauntlet* than *Zelda*. It cheapens the game so that the oneplayer action becomes boring

Edge rating: Nine out of ten

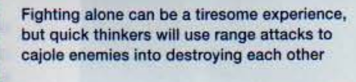












Fighting alone can be a tiresome experience, but quick thinkers will use range attacks to cajole enemies into destroying each other





Individual qualities

Phantasy Star Online isn't a territorially huge game, but it still offers a near-infinite gaming experience. Four zones, each subdivided into a series of levels, comprise you and your team's investigation into the problems on planet Ragol. That's the main quest sequence, playable on three separate difficulty levels according to your character's level. Further subquests are available on request, and more are downloadable, but it's not the wealth of missions that make *PSO*'s scope so epic – it's that the game experience changes with every new group of people you meet.







After two outdoor levels, *Phantasy Star*'s pastel mood becomes darker and subterranean. The basic game structure in the mines, caves, and ruins remains the same, however, though your team's strategy may change as you encounter tougher monsters. Weaker players will find a keyboard essential to cry for help quickly

Tempest 3000

Format: **Nuon** Publisher: **Hasbro Interactive** Developer: **Jeff Minter** Price: **$30 (£21)** Release: **Out now (US) March (UK)**







To make things even more memorable, the game is crammed with samples from Minter's goats and his sheep Flossie. New weapons and levels are just a bonus

Tempest fugit

Back in 1981, game fans found a new machine in their local arcade that they rather liked. *Tempest*, the work of then Atari coder Dave Theurer, proved very popular at a time when abstract games were all the rage. Like many of its counterparts, its premise was remarkably simple yet the execution exemplary. In 1994 Minter took this already addictive product and masterfully enhanced its playability by creating an exquisite audio/visual melange, with gameplay abilities that have rarely been challenged. Sadly, *Tempest 2000* premiered on Atari's ill-fated Jaguar and far too few experienced its delights.

Assuming such things were possible, to spend some time inside Jeff Minter's mind would almost certainly be a unique experience. Other developers who coded around their own intriguing ideas during videogaming's childhood are still working in the industry today, of course, but few – if any – can claim to have stuck with their personal ideology with the kind of conviction as the father of the likes of *Llamatron* has over the years.

If his previous titles have consistently demonstrated this, *Tempest 3000* settles the issue in such a convincing manner as to leave no doubt regarding Minter's motivation. *T3K* exists because he simply wanted to play this exact game – he has designed it according to a personal doctrine. You can't begin to imagine that at any time there was any concern regarding how the average gamer might interpret the results – and the game is undoubtedly better for it.

In truth, there's nothing remarkably revolutionary about this third *Tempest* update (*Tempest X*, released in 1997 for the PlayStation, was coded by High Voltage). This won't come as a surprise to anyone who has followed its development on Minter's own Web site, of course. Or, for that matter, anyone fortunate (or discerning) enough to have experienced *T2K* (see 'Tempest fugit'). Why mess significantly with a near-perfect concept when a few careful, considered tweaks will do?

And so, while the visuals have undergone the kind of psychedelic treatment that would intimidate the most ardent Flower Power devotee, the play mechanics of the game remain the same – as the Claw, your task is to blast anything and everything adventurous enough to make its way up the web into an early spacial grave. Occasionally, some will fire at, try to electrocute, or grab you. Conversely, you'll learn to casually remove Flippers, discourage Spikers from clogging up the web, and hate Pulsars with a passion. In common with this trio, the other 16 varieties of opponent also display their individual behavioural and attack patterns, knowledge of which becomes crucial if you plan to live long enough to make it on to the high-score table.

The visuals have undergone the kind of psychedelic treatment that would intimidate the most ardent Flower Power devotee



As with *T2K*, superb visuals are beautifully supported by a suitable soundtrack which incorporates some wild stereo effects, further drawing you into the game. The outcome can prove insanely enchanting

Naturally, the further you get, the more complicated things become. While initial webs are remarkably simplistic, on later levels your opponents cause them to spin and/or alter their structural integrity, resulting in some particularly anxious gaming moments.

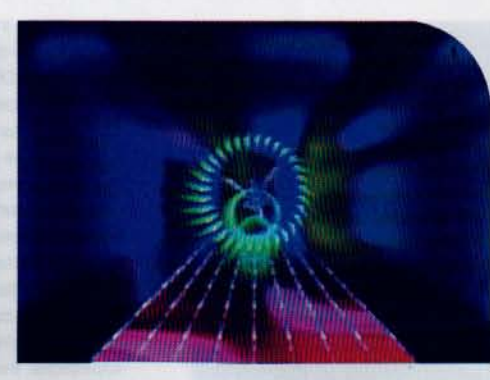
Furiously frenetic action has always been *Tempest*'s essence, and *T3K* is no different. If anything, things are even more berserk here. Onlookers may find it impossible to tell what's happening, but the player is never left wondering how or why his/her Claw has suddenly been sent to plasma heaven. The game engulfs you like few others, and, provided you have the right environmental setting, will keep you in a trancelike state for a surprising amount of time – it's not uncommon to find a couple of hours have suddenly elapsed over what seemed like only a few minutes.

Yes, it is repetitive. But only in the same way that *Tetris* is. *Tempest 3000* matches Alexei Pajitnov's masterpiece for playability and may beat it in terms of player involvement. It's beautifully balanced, too, constantly forcing you to take risks if you seek the points – yes, you can use the superzapper (smart bomb) and clear the screen, but have you noticed that every time you do, you lose your multiplier bonus? The game also boasts an adeptly judged difficulty curve.

Chances are many of today's gamers













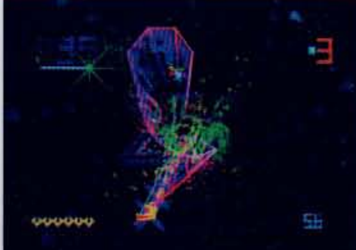
Occasionally, too much onscreen action reveals the odd instance of slowdown, but it's not problematic

will simply disregard Minter's latest slice of psychedelic genius. And in an industry currently obsessed with increasingly complex titles, be they FPSs, RTSs, MMORPGs, or whatever, it's infuriating to find it difficult to convey just how appealing the purity of this title becomes.

Edge certainly isn't suggesting you should go out and purchase a Nuon-equipped DVD player just to sample the delights of *Tempest 3000*. However, if you are thinking of upgrading your existing movie-playing machine, the arrival of this brilliant update should prove an extremely convincing argument for a Nuon-badged rectangular slab of consumer electronics. Now, who said bedroom coding was dead?

Edge rating: Nine out of ten







The real beauty of *Tempest 3000* lies in the playability more than in the admittedly attractive visuals. Minter has taken a wonderfully clean premise and updated it for the 21st century – few games nowadays prove as compelling, despite this title boasting play mechanics drawn from videogaming past

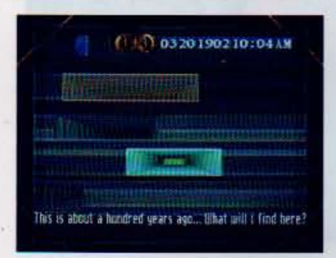
Shadow Of Memories

Format: **PlayStation2** Publisher: **Konami** Developer: **In-house** Price: **¥6,800 (£40)** Release: **Out now (Japan) TBC (UK)**









The time zone screen keeps track of your location and the places you can transport to. The time travel animation is initially impressive, but pales after multiple viewings

Could the interactive movie finally be about to come of age?' wondered the *Shadow Of Memories* preview in **E**89. Well, that depends. If coming of age is the same as maturing – a deliberate move away from the teenage nonsense of *Night Trap* and *Voyeur*, and into something more of an appreciable art – then maybe it is. But if the implication is that the *Shadow Of Memories* dynamic might hold the key to some game/film crossbreed nirvana, then the question couldn't be more misleading.

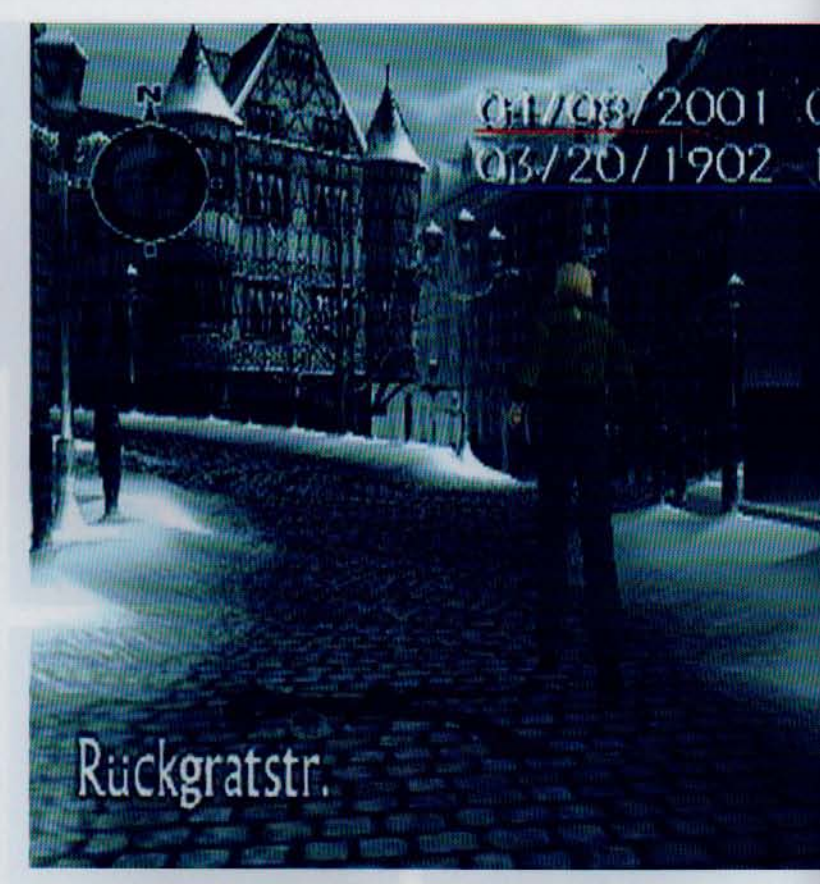
Still, if we're to judge it on its dramatic aspirations, then it's a vaguely spooky time-travel piece, reminiscent of a Sunday evening BBC serial. The set design stems from small-town Germany, and the script's a bit of Christopher Nolan's 'Memento', a bit of Spielberg's 'Back To The Future', a lot of generic movie cliché, and a philosophy that could pass for 'Cause And Effect For Dummies'. After being stabbed to death in a street attack, Eike, the game's ponytailed hero, finds himself given a chance to slip back in time and change circumstances so the attack never took place. If he succeeds, then he's attacked somewhere else, and has to use his pocket time-travel device to alter that, and so on. Four time zones exist: the present, the 1980s, the 1900s, and the 1580s, and changing something in one alters situations in the subsequent periods.

As far as it goes, that part of the game is acceptable. It's not that the situations or confrontations thrown up by the plot are predictable, nor that the twists and turns disappoint – it's that everything's handled so childishly. Maybe something's been lost in the translation, but blame shouldn't lie entirely with the cartoon acting, because there's something missing

There's something missing at *Shadow Of Memories*' heart. The feeling pervades that you're watching mannequins playing out roles

at *Shadow Of Memories*' heart. The models may be as perfectly curved and carved as the backgrounds, but essentially they're blank, as empty as an untouched canvas. The feeling pervades that you're watching mannequins playing out their roles. It's a puppet show, not a film.

Worse still, it's a puppet show that offers little audience interaction. Despite



The city changes through the ages, but always looks impressive. Interestingly, the earliest time period is rendered predominantly in sepia tones, and the 1900s (above) are pictured as black and white

the much-vaunted multiple endings, your opportunity to affect the future is limited to simple scripted events. Everything, save the sparsely used object-manipulation menu, is controlled by the circle button, and your prime method of interaction is walking up to people and talking to them, *Shenmue*-style. You press circle on an old woman, and she talks, and a little piece of that chapter is solved. You press circle on a young girl, and she talks too, and another part of the time-warped puzzle slides into place. You spot a gentleman in the gorgeously constructed café, and you press circle next to him: he's not interested. And then, thanks to the vagaries of time-travel, you see yourself slumped on a nearby table. For want of anything better to do, you press circle on yourself. And you die. Properly. Game over.

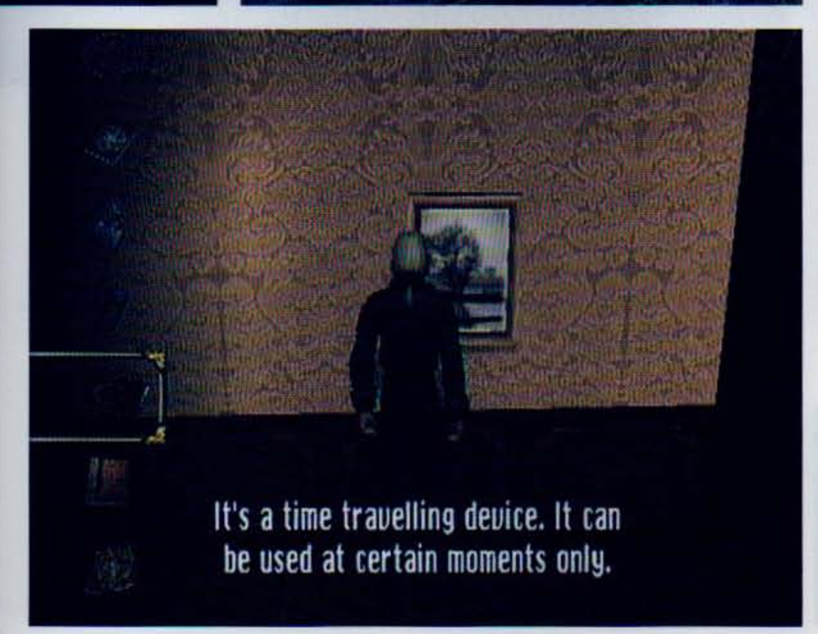
Fans of dimensional theory might say your instant evaporation by paradox is predictable, but in the context of a dynamic that requires your willingness to test absolutely everything with the circle button, it's incredibly frustrating. Worse still, there's no chance to learn from your mistakes, since the situation never reoccurs. The result? A pointless sense of caution, and a feeling that every moment of interaction is Russian roulette. This is a shame, because when the strands of the story are finally drawn together, there's a feeling of satisfaction and closure often lacking on completion of other games – a sign of the thought and time that's gone into the plot structure. If the same amount of care had been placed in the game dynamic, *Shadow Of Memories* might have been less of a disappointment.

Edge rating: Four out of ten



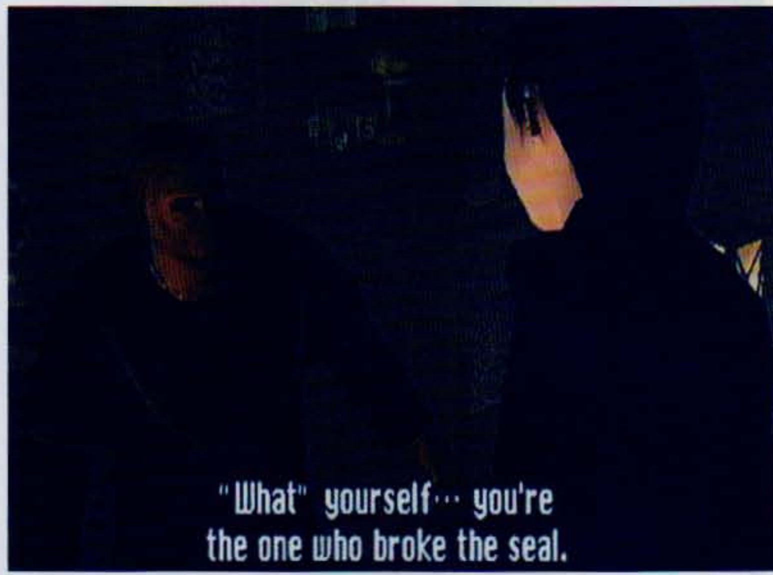






The inventory screen behaves like those in countless adventure games, but is used sparsely throughout the eight-chapter story. A glance around the art gallery reveals paintings which change as you alter history





All the cutscenes are executed with the game engine, which lends a coherent feel to the adventure. Unfortunately, too much of your time is spent watching the action rather than participating in it

Decision making

The game occasionally asks you to make decisions, but it's a false freedom. A house is burning down, and a child asks: "Won't you save my grandfather?" Say yes, and you enter and die – but that's all right, it's a plot-developing death, not a game-over death. Say no, and… nothing. You hang around, with nothing else to do but approach the child and tell him you've changed your mind. The burning building still kills you. Death is obligatory, but since death's essential to the plot, that's fine: it's the thin façade of choice that dismays.



Onimusha

Format: **PlayStation2** Publisher: **Capcom** Developer: **In-house** Price: **¥6,800 (£40)** Release: **Out now (Japan)**









Your actions trigger sequences of FMV throughout the game. These are stunning, particularly the introductory battle sequence, and excellent directed

Save the princess, slay the demon. Survival horror has always been a fairytale genre, and *Onimusha* proves no exception. Steeped in Japanese history (chronologically just preceding *Kessen*'s Tokugawa era) and spiritual mythology, the plot here has hero Samanosuke and his female companion Kaede trying to rescue Princess Yuki from her evil kidnappers.

Survival horror is perhaps a genre that – in this form at least – is on its final trawl through gamers' wallets, too, since there's an overriding feeling that next-generation systems really ought to be offering us something more than polygonal characters wandering around prerendered backgrounds. No matter: *Onimusha* was originally conceived as a PSone game, and, however much that shows in its simplistic execution, this is also apparent in the well-developed, rounded game structure.

Biohazard veterans will find slipping in to the *Onimusha* dynamic a simple case of adjusting to the high-resolution visuals and the predominantly close-range combat. Others may find the standard D-pad control initially disconcerting next to more instinctive analogue-based systems. Though it soon become natural enough for inter-room exploration, the control method isn't best suited to sword combat, due to the speed of movement that's often required. A quick spin executed with the R2 button goes some way towards easing the problem, as does the hesitancy of the enemies. Sequential presses of the attack button execute combos of slash, spin, and stab moves, with special critical hits on offer to those who time their blocks or taunts perfectly. Once an enemy is slain, his spirit rises and can be captured



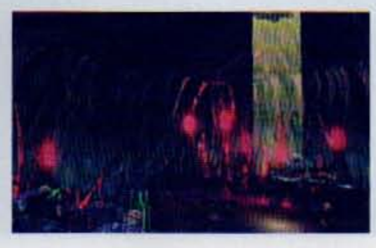
The triangle button executes a special move unique to the sword you're using. The thunder sword unleashes a series of lightning blasts against the enemy, and should be saved for the section bosses

within your sword, adding an experience-point structure to the standard dynamic.

However, for a game that fits – albeit loosely – within the survival horror circle, there's not a lot to horrify here. Naturally, the warped Capcom creations whose sole purpose is to have their souls stolen are gruesome, and gutting them isn't without its gory charm, but the game isn't really played for shock value. There are few real moments of panic – even the standard survival horror staple, the enemy that crashes in from nowhere, is underplayed. There's visceral destruction aplenty, but it's still more *Final Fight* than *Mortal Kombat*.

This is a good game: not close to the work of genius some may have you believe, but not something you should be embarrassed to own

Puzzle solving is limited to the occasional minigame and brief find-this-go-there passages of play. Simplistic, linear, but mindlessly enjoyable, this is another pointer to the game's PSone heritage, which often becomes all too apparent. It's the little things that spoil *Onimusha*'s well-scripted flow, like the jarring pauses when the FMV cuts back to the (visually identical) game, or your character's inability to climb stairs. He won't open doors, either – press circle on the frame



This odd little centipede enemy offers players the chance to travel to the Dark Realm. This are 20 levels of non-stop combat, with access to the game's best weapon as the reward for those who emerge alive









One point in the game sees Kaede crossing a furnace floor. Typically, her journey must be timed to avoid the sporadic jets of flame

The striking organic backdrops are gloomily lit, something unlikely to surprise veterans of the genre



and the screen fades to black, the next room fading in shortly after.

So, while there's no doubt that the genre's going to have to evolve or die, is failing to innovate or to take massive advantage of its host technology something *Onimusha* should be damned for? While it's certainly disheartening, the antique dynamic, flaws and all, carries the title. Essentially, this is a good game: not a great game, not close to the work of genius some may have you believe, but not something anyone should be embarrassed to own. It stands solid and polished amongst shelves otherwise packed with mediocre, lacklustre software, and that's reason enough for PS2 gamers to consider it adding it to their collection.

Edge rating: Seven out of ten

Replay incentives

Although *Onimusha* won't take long to complete, doing so provides you will an overall ranking (the maximum being Onimusha itself) and the incentive to replay for a higher score. Extra costumes and a 'Special' difficulty level are available, as are extra weapons for those prepared to search every corner of every well-rendered room the game has to offer. Other bonuses include Oni Spirits, a subgame which reveals itself should the player find all 20 hidden flourite crystals, and a trailer for the inevitable *Onimusha 2*.







Severance: Blade Of Darkness

Format: **PC** Publisher: **Codemasters** Developer: **Rebel Act Studios** Price: **£30** Release: **Out now**



Character flaws

In keeping with the stereotypical setting, the four playable characters in *Severance* are suitably archetypal. Tukaram, for example, is the Conan-style barbarian, while Naglfar is the redoubtable dwarf, Zoe the amazonian warrior, and Sargon the knightly all-rounder. The opening level of the game is different for each one, and all possess a unique set of special moves, but given that there is barely enough incentive to complete *Severance* once, their inclusion is slightly redundant.







Although a nice addition, long-range weapons add little to the mix (below), and sudden death obstacles such as falling boulders (bottom) contribute to the uneven pace of the game



Although each character has their own set of special moves, the differences are largely cosmetic because poor collision detection adds a significant random element to combat

The twin selling points of *Severance* are some impressive lighting effects and a super-abundance of blood and gore. Wow. The novelty value of gushing blood and hacked-off limbs is negligible, thanks to countless predecessors like *Soldier Of Fortune*, while pretty shadows are impressive for about five minutes before the realisation sets in that this plays like an object lesson in how not to design a videogame.

From the hackneyed and stale environments, characterised by bland and repetitive textures, to the ludicrously cumbersome control system, it is staggering to think that this is the culmination of nearly five years of development, and it is mystifying that Codemasters has chosen to publish it.

Uninspired level design contributes to uneven pacing, with spiked pits and collapsing bridges making sure that the load screen is as much a part of this game as deficient AI and the need to smash crates. It also serves to highlight some serious clipping problems, and a control mechanism that manages to overcomplicate the tried-and-tested FPS standard. The lack of a strafe button is a serious oversight, as is the convoluted run command, which requires the forward key to be double tapped. The real problem, though, is that the animations for ingame actions can't be interrupted, which results in a sluggish response time and a loss of sensitivity.

While all of this would be more than enough to damn any title, *Severance* has more in store, because the combat procedure, which is the real core of the game, is just as flawed. At its heart is a beat 'em up combo dynamic, bolstered by a simplified RPG-style level advancement. Although this is an interesting concept, it is undone by poor collision detection and a fatigue bar that serves no purpose apart from preventing the player from attacking when they least expect it. To compound this, the effectiveness of special moves is also hindered by substandard collision detection, as well as lengthy animations, and the lock-on targeting system doesn't work – which is unforgivable given that this was perfected in *Ocarina Of Time* two years ago.

Some technohead PC owners will undoubtedly find solace in *Severance* as a technical demo with which to impress their friends. Anybody expecting a rewarding game would do well to steer clear.

Edge rating: Two out of ten

Hostile Waters

Format: **PC** Publisher: **Rage Software** Developer: **In-house** Price: **£30** Release: **Out now**

Clever, clever Rage. Faced with an insular PC market that rejects arcade games time after time, the company has realised that the only way in is by infiltration. Few games based on pure adrenaline outside the FPS genre manage to make an impact, but give your project a planning-map screen and some small element of resource management, and the wannabe PC strategists will flock to it. Or that's the theory, at least, but as those same strategists know, sometimes you need more than just a plan.

Hostile Waters sees another utopian future about to be damned by a cabal of evil masterminds. Since this is a universe where war is passé, humanity is vulnerable. Thank goodness, then, for the reactivation of a long immobile über-troop-carrier, and your expert battle management. Gather resources, regenerate them into vehicles, and send the vehicles to destroy: it's a formula that'll be familiar to most PC gamers. Except this isn't an RTS, despite a dash of the same dynamic.

Each of the constructed units can be controlled directly by the player, as a thirdperson shoot 'em up (or gather 'em up, if you choose to step into the harvester). The other option is to direct them via the map, then leave them in the command of chips containing the personalities of dead soldiers. It's not a new concept, as fans of classic *2000AD* strip 'Rogue Trooper' will testify, but it's one that applies itself perfectly to the title. Place a gunner's chip in a resource-gathering vehicle, and he'll whine about not seeing enough action. Place a pilot's chip in a helicopter, and he'll perform better, going about his business with violent enthusiasm.

Place yourself in the hot seat, though, and the game proper begins, because *Hostile Waters* has a heart that's almost purely arcade. You still need more than just a plan, but this time it's not luck that'll swing a conflict, it's your own skill. Still, good planning will mean you don't need to fly faultlessly – Rage claims it's possible, though by no means easy, to beat the game without ever taking control of a vehicle – while fast reactions and good piloting can compensate for poor strategy. It's an excellent balance, and one that deserves to creep into the collections of the PC faithful, whatever its genre is.

Edge rating: Eight out of ten







An air attack is effective against ground forces, but enemy helicopters are usually quick to react



Resource gathering might not be the most exciting job in *Hostile Waters*, but there's nothing to stop you doing it yourself if you want. Still, it's much more rewarding to command an attack helicopter of hovercraft



Engine performance

The engine behind *Hostile Waters* has been in development for three years, something that's apparent in the in-game physics. Shoot a telecoms tower midway up and you can watch the top section keel over and tumble down the hillside, or fly your 'copter over the wreckage of an opponent downed at sea, and you'll see it get slowly washed to shore. The engine was also used in *Wild Wild Racing*, and Rage is planning to use it for future releases

7 Blades

Format: **PlayStation2** Publisher: **Konami** Developer: **In-house (KCEJ East)** Price: **¥6,800 (£40)** Release: **Out now (Japan) April (UK)**









The lock-on function works more convincingly with Yuri. Her dynamism – which includes climbing scenery – also makes her more interesting than the brutish Gokurakumaru





Weapon energy

Each weapon can deliver a more potent attack when its energy gauge has reached maximum. This is hardly a startling innovation in a fighting game, but the pyrotechnical accompaniment is impressive nevertheless. The slowdown produced by such attacks is intentional.





The scenery throughout *7 Blades* is varied, if not the most detailed **Edge** has seen on PS2. The narrative changes subtly depending on which character you choose and as other colleagues come to your aid

Like Kaizo Hayashi's films, *7 Blades* will probably struggle to find a massmarket audience, but it certainly deserves cult status. The director of 'The Legend of Zipang' – on which the game is loosely based – has thankfully brought all his trademark touches of fantastical imagery, nutty creatures, and idiosyncratic characters to the game. It is unfortunate, then, that his artistic vision has not been matched by similarly engaging gameplay.

The plotting in *7 Blades* is unusual for a videogame in that it is unveiled with economy and style. Hayashi's fusion of 18th century history and his own distinct sci-fi mythology gives the game an appealing freshness. Delightful moments abound, too: wander too close to a seemingly inert scarecrow and it will animate for a brief moment. Such touches generate a desire to explore every avenue of the game. But the praise must stop there.

Dispatching ridiculous numbers of enemies in 3D arenas is an appealing premise, but those who have already sampled the delights of *Dynasty Warriors II* will be disappointed to hear that KCEJ East's effort lacks the polish of its close cousin. Like so many games venturing into 3D, *7 Blades* suffers from a badly implemented camera system and an over-fiddly lock-on function. The chase camera is particularly indecisive, and while the player can alter the view manually (with the shoulder buttons), this proves slow in the extreme.

While two characters are playable in the game – Gokurakumaru and Yuri – each suffers from a lack of sophistication in terms of fighting options. The imaginative implementation of the seven katana weapon system should have been the title's strongest card, but while some bosses require the selection of the most appropriate blade, Gokurakumaru's two-handed sword proves most efficient in every other situation. This, sadly, renders the other blades in his employ redundant. Yuri's choice of projectile weapons are more dramatic, but, again, it is disappointing that the varied array of enemies which are included in the game can all be mown down in such a uniform fashion.

While *7 Blades* is not without its charms, the clumsy implementation of controls and camera do not do Hayashi-san's vision justice. While the title has an expansive personality, it simply has too many character flaws.

Edge rating: Four out of ten

Fear Effect 2: Retro Helix

Format: **PlayStation** Publisher: **Eidos Interactive** Developer: **Kronos Digital Entertainment** Price: **£30** Release: **March 16**

Although outwardly it conformed to the survival horror blueprint, in many ways the original *Fear Effect* was more typical of a traditional point-and-click adventure. While its successor is a prequel in terms of narrative, judged on gameplay alone it is an upgrade rather than an out-and-out sequel. This means you can expect more wilfully obscure puzzles and frequent deaths, attractive animé-influenced graphics, and the return of a carefully plotted narrative that takes place in a squalid underworld.

The problem with this is that, despite noticeable improvements since the first episode, there are problems inherent in this formula. The brain-aching conundrums that punctuate the relatively short bursts of action and FMV provide a tangible sense of satisfaction when a solution is found, but they also present an obstacle to progress and a possible barrier to entry for less patient gamers. They also frequently result in death, which though an **Edge** bugbear, is somehow more bearable than usual – perhaps because it is in keeping with the point-and-click philosophy. The fact that Kronos has cut out the reload times since the original is a welcome addition, but another reason that frequent and sudden deaths do not grate as much as they should is that these perilous encounters add impetus to the plot.

The original *Fear Effect* was one of those rare FMV-heavy games in which prerendered sequences actually added to the game, and *Retro Helix* is no less successful in this respect, despite adolescent leanings at times (see 'Sex(uality) sells'). Likewise, the control system has been tightened up and made more responsive, and combat feels more balanced – particularly with regard to boss encounters, which no longer hinder the pacing of the game.

But while *Fear Effect 2: Retro Helix* is a sufficiently accomplished enhancement of the original, it does seem that this genre, with its puzzle-heavy emphasis, has nowhere to go on more advanced hardware apart from down the more action-oriented path that the *Resident Evil* series has already travelled. Certainly Kronos has got about as much out of the old grey box as it is likely to, but for the series to make the leap to a new hardware platform the developer will have to go try harder to push at the limits of the genre.

Edge rating: Six out of ten



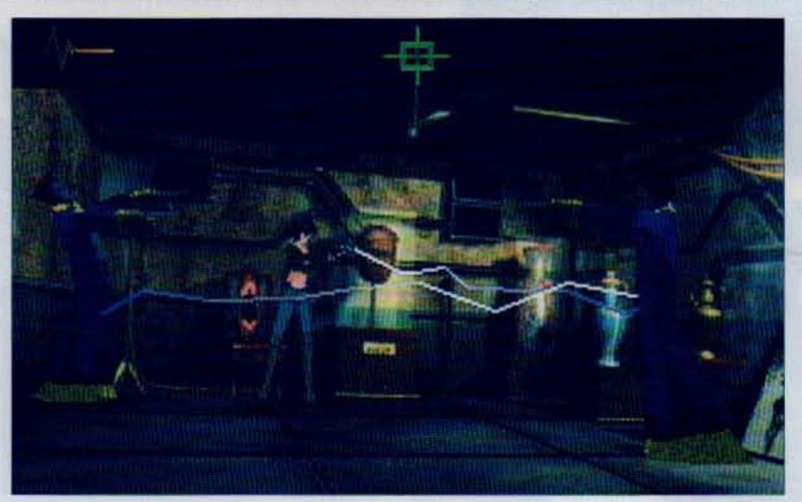






Although clues to the game's many puzzles can be found fairly easily, they are without exception deliberately obscure and frequently unhelpful





Combat is much more balanced than before, with a good range of weaponry to choose from. It could be argued that boss encounters are now a shade too easy, but compared to the original *Fear Effect*, these are no longer quite as invasive, leaving the characteristic puzzle-solving action and engaging FMV intact



Sex(uality) sells

One of the less desirable legacies of Lara's success is the cynicism with which publishers will grasp any opportunity to market a title by drawing attention to a sexy female lead. Adverts for *Retro Helix* have already had to be withdrawn because of their focus on the lesbian relationship between Hana Tsu-Vachel and new character Rain Qin. During the game, however, this apparently mercenary addition is less intrusive than expected, and in terms of a relatively sympathetic portrayal of a homosexual lead character, *Retro Helix* may be something of a first.

Vanishing Point

Format: **Dreamcast** Publisher: **Acclaim** Developer: **Clockwork Games** Price: **£40** Release: **Out now**



Crazy Taxi revisited

One of *Vanishing Point*'s saving graces is its highly enjoyable, if somewhat derivative, Stunt mode. Cleanly lifted from *Crazy Taxi*, it involves a series of increasingly difficult tests that require quick negotiation of figure-eight courses, 360° mid-air spins, plus, suspiciously, the popping of all balloons in an open-plan arena. The execution is spot on, each task incrementally harder than the previous one. The fun gleaned in this mode eclipses that of the main game tenfold.











You expect an increase in performance from unlockable vehicles, but while *Vanishing Point* provides the speed factor, when it comes to improved grip and handling it proves sadly lacking. Both the frequency and possibility of a slide remain alarmingly high

Given the crammed nature of the driving genre, innovation is borderline mandatory for any title wishing to stand out. Clockwork has indeed innovated, but any sense of accomplishment is almost entirely marred by a raft of inexcusable shortcomings.

The innovation comes in the form of race structure: first place is measured not by finish position, but by the overall time taken to cover a set distance. Other competitors and non-race traffic negotiate the same set of roads, but are strung out along its length. Every time you hit a checkpoint you can keep track of your ranking, so there's awareness of your performance at all times. In theory, this approach should make skill as much of a priority as speed, but any hopes of this are dashed by appalling handling and unjust AI. Almost every vehicle, be it the stock Ford Mustang, or the Dodge Viper you can acquire later in the game, has a ridiculous amount of rear-end swing, forcing you to overcompensate every few seconds. Control is non-existent at speed – something *Vanishing Point* has in spades – so high-velocity thrills are thin on the ground.

Further irritations come in the form of fellow racers that ram your vehicle simply because it is in their path. Avoidance and braking doesn't seem written in the enemy routines, which makes for foul play in the final strait of a 12-lap race; a single impact is enough to deny you any hope of hitting the strict time limits set by the game. The absence of a restart option hampers progression further, and with 30 minutes' racing wasted, it's unlikely many gamers will care to repeat the ordeal.

However, *Vanishing Point*'s outward appearance is exceptional, with the swish presentation fleshed out by high-resolution graphics, a solid 60fps, and accurate car modelling. Five racing modes, a whole atlas of tracks, plus a 40-strong complement of vehicles to unlock all appeal for tolerance of *Vanishing Point*'s flaws. Unfortunately, ten minutes of game time see these positive thoughts all but obliterated. Times to beat rapidly become lean, with circuits requiring tens of attempts before the necessary top-three position is gained to progress.

For the truly patient there is enjoyment to be had, but with a constant sense of being physically cheated, *Vanishing Point* can be a miserable experience that both grates and infuriates in equal measure.

Edge rating: Three out of ten

Metal Slug X

Format: **PlayStation** Publisher: **SCEI** Developer: **SNK** Price: **¥5,800 (£35)** Release: **Out now (Japan) TBC (UK)**

Metal Slug X may well just be a sidestory to its parent trilogy, but it's no less valid. Quite the reverse, as SNK has seen fit to partially break the mould with a plot torn from 'Independence Day' and character designs to fit, in the form of marauding aliens and enormous flying saucers.

The formula of the series is simple enough, and although travelling along horizontal environments, blasting everything in sight may be a well-worn premise, it's also a near-perfected one. Armed with a revolver, a knife that functions automatically at close range, and a limited supply of grenades, all the player need do is concentrate on avoiding the volleys of flak and returning fire throughout the game's six lengthy levels. The usual power-ups – shotguns, rocket launchers, etc – feature, and are joined by a laser, which fits in with the 'alien invasion' take on the previous World War II storylines.

In addition to the Metal Slug vehicle, the player encounters additional transport that includes a mechanical frog and a heavily armed camel. Yes, SNK's sense of humour runs as deeply through this chapter as any of the others: facial expressions are wonderfully caricature-like – soldiers shriek when they notice your approach – while the intestine-spilling death routine of the alien attackers is genuinely grisly, but wholly entertaining.

Where you might expect there to be a rift between the graphical abilities of PlayStation and Neo-Geo, Sony's machine valiantly holds its own, convincingly recreating all the visual quality. Given the power of SNK's MVS system, a reduction in animation frames and poor-quality scaling are trace faults compared to the sheer enjoyment that is extracted from such a tired genre. Whether the choice of four characters lends much to the proceedings, or what the training section and art galleries are worth is a moot point – lovers of SNK-branded titles will be drawn by the exquisite and energetic gameplay. Such a stellar port is an added bonus.

It would too easy to label *Metal Slug X* lowbrow, relying on reflexes rather than cunning or lateral thinking. With 2D titles not a hot property at the moment, it would be understandable for many PlayStation owners to pass on *Metal Slug X*. This would be something of a tragedy, as SNK's latest outing oozes playability, trouncing more grandiose titles with violent ease – and it's as captivating today as it ever was.

Edge rating: Eight out of ten





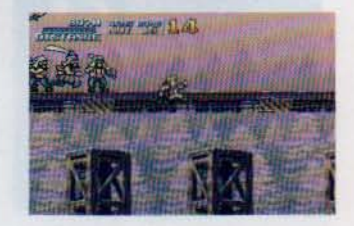




Various diversions exist in *Metal Slug X*. One memorable experience is the enormous tower-eating machine that chases you through a level



As well as an enormous complement of enemy foot soldiers to contend with, SNK has stocked up on huge vehicles of destruction to hinder you further. Expect the levels of firepower to increase tenfold, however



Another Mission

Completing *Metal Slug X* rewards the player with 'Another Mission', which contains an additional 12 levels to tackle. These are thematically similar to the main game, but have a new layout, essentially presenting a Time Attack challenge whereby you progress as far as possible before a single hit fells you. Ultimately, the end achievement is simply the most points, but, again, SNK has proved that the most ancient of prizes – the high score – is enough to justify participating. Like *Crazy Taxi*'s jump challenge, *Metal Slug X*'s distance test is undeniably enjoyable.

GigaWing 2

Format: **Dreamcast** Publisher: **Capcom** Developer: **Takumi** Price: **¥5,800 (£34)** Release: **Out now (Japan) TBC (UK)**







The use of a smart bomb results in some of he most overblown visual effects yet seen in a Dreamcast game. Unsurprisingly, there is little chance of survival for any vessel in its path









The firing patterns adopted by enemy ships are more evidence of Takumi's input. As in *Mars Matrix*, given such ordered waves there is often scope to predict where safe zones will appear

Four's company

GigaWing 2's main innovation is the simultaneous fourplayer mode which sees a quartet of ships make their way through the main game restricted only by the allowance of one smart bomb at a time – any machine would be hard pressed to deal with the graphical overload should four occur at once.

A problem with the fourplayer mode is that the formation can simply meander along, bombarding the enemy in rotation, and remain virtually impregnable to attack thanks to strength in numbers and a similar number of attack craft to the oneplayer game. Skill and reflexes really aren't required, and the entire experience eventually leaves you feeling somewhat nonplussed.

On first impressions, the 3D graphics of *GigaWing 2* would seem to offer a fresh angle to the shoot 'em up genre. However, dig a bit deeper and you'll discover Takumi's sequel conforms to every last cliché, flaws and all.

Nevertheless, the title has its merits, the most striking of which is the visual element. Full high-resolution 3D backgrounds feature, their polygonal nature affording dramatic routes for the camera to follow, albeit on rails. Dropping vertically, for instance, is rendered more dramatic by the new look, and enemy vessels and weapon fire are also considerably fleshed out. Explosions in particular benefit enormously from the update.

However, beyond the graphics, things seem relatively unchanged, aside from the videogame first of a simultaneous fourplayer option. Although this may be considered an innovation, there is perhaps reason for such an inclusion appearing so late in the day – it makes for messy, confusing play that fails to enthuse for more than a few minutes. Fortunately, *GigaWing 2* possesses a raw enough approach in its basic state to satiate most shooting fans. Enemy fire appears in huge waves, with a chargeable reflect function providing an additional strategic element, but bar this it's overblown firepower and screen-engulfing bombs all the way.

It's at this point that fissures appear in the structure of *GigaWing 2*. Upon reaching the third level (there are six in total, with eight difficulty settings), the ante is upped considerably as the screen swiftly fills with bullets, and progress becomes more of a matter of luck than skill. Instead of losing lives for sloppy judgement, or having exhausted your bomb supply, your ship count will plummet due to the impossibility of avoiding endless fire. There is simply no margin for error.

Furthermore, *GigaWing 2* is all but neutered by its infinite supply of credits, which make completing the game as much a prospect for the novice as for the veteran. Of course, you can always resist the temptation, but many gamers will find downing the pad voluntarily a near-impossible prospect, and as a result *GigaWing 2* will barely last half an hour. While it burns, it burns bright, but ultimately, given the infinite continues, such a meagre life expectancy is unacceptable.

Edge rating: Six out of ten

C-12: Final Resistance

Format: **PlayStation** Publisher: **SCEE** Developer: **SCEE Cambridge Studio** Price: **£30** Release: **April**

C-12 is the carbon isotrope that underpins life on earth. An alien race is hungry for the stuff, and 'first contact' looks like seeing mankind constituting an interstellar snack for bodysnatching ETs.

Earth as they find it is post-apocalyptic (and predominately green, according to SCEE's Cambridge Studio) and populated by regional Britons who sound suspiciously like jobbing actors trying out their northern accents. However, there is a hero in their midst: resistance leader Lieutenant Riley Vaughan. As Vaughan, you set out to save the day, blasting aliens as you scuttle through a lurid urban landscape. The game's 22 sub-missions comprise fetch-and-carry tasks and alien shooting, punctuated by puzzles such as button combination exercises.

Despite their relentless green hue, the landscapes are impressive by PlayStation standards, and benefit from the thirdperson perspective as the camera zooms out to show off larger areas. That said, the gameworld is not expansive due to the development team ploughing much energy into minimising loading times. Out go prerendered backgrounds, and in their place come good-looking 3D environments, with regulation PlayStation fogging.

Sadly, the enemy AI is lamentable, a problem that is exacerbated by a distorted difficulty curve. In the first half of the game you can obliterate one robot, only to see his pal take shrapnel in the face but remain stock still. Enemies fire volleys of bullets that inexplicably miss you. It's only later, when enemies deploy shields to absorb your fire, that the game becomes truly challenging and your foes seem even remotely intelligent.

Vaughan sports a laser eye which provides a neat firstperson view for precise shooting and environment analysis. This visual tool, with its 'Predator'-style electronic feedback sound, adds greatly to the atmosphere. Unfortunately, the spell is broken when one of your chirpy pals bellows: "Let's kick some arse," while waddling for cover and dodging fire from lethargic aliens.

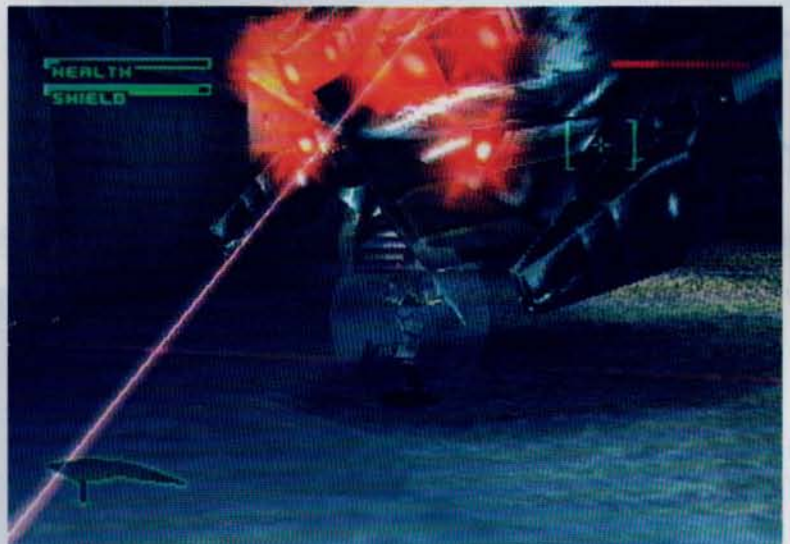
C-12: Final Resistance is reminiscent of *Syphon Filter* in its 'you versus the world' plot. The *Syphon Filter* games are, however, far more sophisticated and varied in terms of setting and plot. *C-12*'s difficulty curve and repetitive enemy encounters are its undoing, and let down what is otherwise a commendable technical effort.

Edge rating: Five out of ten













The firstperson mode (above left) is more precise than the lock-and-unload auto-aim facility, and allows you to pick off enemies under cover. The resistance soldiers (above right) are a docile bunch who seem to spend more time incarcerated in enemy holding pens that actually helping you progress



Near the end of the game Vaughan falls into enemy hands and is partially mutated. Needless to say, he comes back fighting



Turrets of fire

C-12 features several encounters with boss characters who will toss significant ordnance your way. Luckily, there is a selection of static resistance turrets equipped with chainguns, which beef up your chances of survival, and, ultimately, success. The guns, which overheat quickly, target from a firstperson perspective and can be operated via remote control.

Fighting Vipers 2

Format: **Dreamcast** Publisher: **Sega** Developer: **In-house (AM2)** Price: **¥5,800 (£33)** Release: **Out now (Japan) TBC (UK)**





Some combatants are equipped with questionable accessories. Emi (above) is accompanied by a blue teddy bear. To what end, though, is unclear



Destroying an opponent's body armour is readily apparent, both in terms of seeing the armour fall away and by way of a flashing icon. Red indicates that a knockout is likely within seconds

It's surprising how often a developer will rehash its greatest moments, substituting its former innovation with a superficial overhaul. *Fighting Vipers 2* may claim to offer new slants on the fighting genre, but these aren't immediately obvious in the game proper.

Much is instantly recognisable: AM2's distinct designs, although gaudy and brash, are in line with those of the former incarnation, and the simple button configuration of punch, kick and guard is lifted directly from *Virtua Fighter*. The inclusion of body armour is, at first, a noteworthy feature. The characters are able to destroy one another's shields with repeated blows, opening the door for massive damage to follow.

However, the emphasis this feature gives to defence is at odds with the entire premise of fighting games: given that you can only pull off a one-hit kill after an opponent is stripped of armour, which can take as long as four rounds, an otherwise taut, rapid bout can drag on as you manoeuvre for the coup de grace.

Despite this, *Fighting Vipers 2* is a satisfactory, if routine addition to the burgeoning Sega fighting library. Ignore the armour and enjoy it for what it is – a thinly disguised episode of *Virtua Fighter*.

Edge rating: Five out of ten

Unreal Tournament

Format: **PlayStation2** Publisher: **Infogrames** Developer: **Epic Games** Price: **£40** Release: **Out now**

Anyone who enjoys FPS arena games will find a lot to relish in *Unreal Tournament*. Sadly, an underwhelming game engine, flat textures, and occasional framerate problems let down an otherwise entertaining game.

Nevertheless, there is also much to admire in Epic Games' package. The wealth of game modes, which include Deathmatch, Domination, Challenge, and Capture the Flag, are all different enough to warrant extended play. Particularly laudable is the Assault mode, which asks you and your team to take a fortress (or similar target) which is being guarded by a rival team intent on your destruction.

Weapons, too, are varied and will subtly alter your approach to the game depending on which is carried. Sniping from a rooftop position is particularly entertaining (especially against human opponents). However, the speed at which your character turns on the spot is unnecessarily ponderous.

Ultimately, *Unreal Tournament* lacks the finesse, and, crucially, the speed of *TimeSplitters*. There are novel touches, but these are overshadowed by a lack of pace and presentational imperfections.

Edge rating: Six out of ten





The oneplayer experience can be a lot of fun in short bursts, but move to the multiplayer split-screen modes and the game simulates walking through treacle



Each weapon has both a primary and a secondary function. The Redeemer, which fires nuclear warheads, is particularly nasty and can be controlled from a firstperson perspective until it reaches its target

SIN proves popular

NGame's development tool kit is opening new doors for crossplatform developers

Dave Lloyd, nGame's technical and operation director









Alien Fish Exchange **(top) was nGame's first big hit. Interestingly, 25 people have put in the 100-odd hours needed to complete the game. Running on WAP and the Web, and soon to be rolled out on DiTV,** ***Chop Suey Kung Fu*** **(centre) is a simple turn-based beat 'em up. As sophisticated as mobile gaming gets,** ***Merchant Princes*** **(above) is a massively multiplayer, persistent trading WAP game**

Despite the public's initially tepid reaction, UK developers are enthusiastically embracing the opportunities provided by mobile gaming. Compared to traditional retail box development, however, the challenges of WAP require a new mindset.

Not only do designers have to work within the protocol's turn-based limitations and problems such as small screens, but they also have to ensure they can handle administrative tasks such as logging players on to a portal and deal with different handsets' varied browser software. Games must be compatible with the underlying server and database infrastructure as well, and, as servers run 24/7, the game must be easy to update and maintain. Patches are not an option in this sector of the game industry.

Enter nGame's mobile game development tool kit. Developed and used internally over the past few years on titles such as *Alien Fish Exchange* and *Chop Suey Kung Fu*, the Cambridge-based company is now beginning to roll out its product to favoured thirdparty developers.

"One of the key things in the tool kit is a scripting language called SIN, which is a high-level language for describing game-type worlds," says nGame's technical and operator director, **Dave Lloyd**. Built on Java, SIN is an object-oriented and event-oriented language that creates a framework in which game designers can develop content without worrying about protocol issues.

"One important aspect of SIN is its use of a relational data model rather than just a simple object model," Lloyd continues. "An example of how this works is if you want to model a chair inside a room, you traditionally arrange that the chair has a pointer to the room and the room has a pointer to a list of things in it. This falls down when you take the chair out of the room. Then you have to cut all the pointers and reconnect the chair's pointer to the new room, otherwise you end up with the chair thinking it is in room A, and room B thinking it contains the chair. Using SIN, you just definite the symmetric relation: the chair is within room A. It is then possible to ask the room what it contains or ask the chair what it is within. To remove the chair, the relation is simply retracted and reasserted somewhere else."

Another key aspect is that, although SIN complies down to Java, as a programming language it is far easier to use. "Rather than have lots of squiggly brackets and punctuation, SIN is much simpler," claims Lloyd. "It uses layout to show structure. The net result is it is easy to understand. It's got a lot of very specific constructs, even down to really simple things like there is an operator to roll the dice, so you don't have to worry about random numbers."

This is particularly important as nGame plans a more widespread release of the tool kit in future. "The easy source form is good when you are getting people who are technically literate and understand logic, but who are not hardcore programmers," Lloyd points out. "The fact that you are working at a sufficiently high level means that you actually make fewer mistakes, because when you look at the code each line is doing something useful. The net upshot is that we are managing to develop games in just a couple of months."

That speed can only encourage the creativity of game designers – even those trying to squeeze the best of out platforms as difficult to develop for as mobile phones.





After launching ***Data Clash*****, nGame discovered that the card-based game contained some impregnable combinations. Thankfully SIN's maintainability ensured that an extension pack of cards could be introduced to solve the problem**

More than just WAP

With convergence looming over the game industry, nGame is committed to a crossplatform approach with SIN. "This is not WAP technology. This is general-purpose technology," explains Lloyd. "Java phones, the next generation of set-top boxes – all that is going to be straightforward for us."

This is a philosophy which is already working for nGame content. The company's big hit, *Alien Fish Exchange*, is currently available on WAP and Web, and the next step is digital interactive TV (DiTV). "Most of our games are deployed on WML, but we are currently in the business of rolling them out for DiTV," Lloyd says. After some delays, nGame's NTL service, including its turn-based beat 'em up, *Chop Suey Kung Fu*, should be live around Easter.

"The nice thing is you can play the same game on your mobile phone or on the TV. It's the same game and you can play against other people who are even using a difference device," Lloyd enthuses. "There is a lot to be said for convergence platforms. It gets rid of the standard bug bears of a lot of gaming, in that you have to be playing on the same platform."

URL
www.ngame.com



It might not look like much, but the Java-based SIN language should ease the development hassles of making mobile and crossplatform games

Building a community

Codemasters Web master Simon Reid

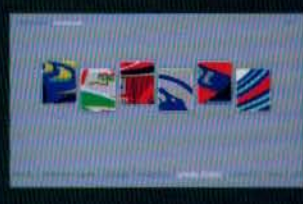












If one quality characterises Codemasters' output, it's the attention to detail lavished on every aspect of the game creation process. From the reproduction of the engine noise of a skidding Ford Focus to keeping fans up to date on Colin McRae's exploits via its Web site, Codemasters understands that there's more to selling games than just sticking a box on a shelf. Creating a community is an increasingly important part of a successful publisher's responsibilities.

With this in mind, Codemasters' latest move to strengthen its fan base is inspired. Whereas 3D Realms' George Broussard has recently stirred up controversy by suggesting Web sites should only use officially provided game screenshots, Codemasters has started from the same position and ended up heading in the opposite direction.

"We get sent a lot of links to Web sites built by dedicated fans of our games, using incorrect, or out-of-date graphics, so it only seemed logical to help them out by providing the correct graphics," reasons Codemasters' Web master, **Simon Reid**. "The idea grew to the point where we are now providing a full package of materials in one easy Zip file – complete with movie files, in some cases."

The release of its first two fan Web site tool kits, for *Insane* and *Colin McRae 2.0*, have proved extremely popular, with more than 5,000 downloads of the zipped assets in the first month. Kits for *TOCA World Touring Cars* and *Severance: Blade Of Darkness* have also recently gone live, driving the number of downloads past the 10,000 mark.

Weighing in at between three and 16Mb per download, the fan site tool kits offer the usual range of screen shots, desktop wallpaper, press releases, and video clips, as well as some funky Shockwave executables, branded screensavers, and animated banner ads. Codemasters is encouraging fans to generate their own screens by including grabbing software in *Insane* – something that will also be supported in *Severance*.

As with all things Internet related, Codemasters has been relatively hands off in determining how this content should be used. "We can't tell people how to design their Web sites," says Reid. "We are simply providing them with the resources to enhance their sites. Obviously there is only so much we can do to ensure fans use the graphics in the way we would like."

Users are requested to include click-through logos both to Codemasters' Web page and a game's dedicated site. A legal notice on Codemasters' download page states that anyone who uses the site in a defamatory way to Codemasters or any of its products will have its content removed, although what this actually means in practice is difficult to ascertain.

The issue of whether fan sites could generate ad revenue is another prickly one, considering Codemasters is promising to link the best fan sites to its main Web site. Reid is unsure, though. "There would be the potential if I believed that banner ads generate enough feedback to our site," he says. "However, I feel banner ads no longer work as a means of directing traffic to a site and hence generating revenue."

But with the future of game development blurring the line between official and fan-developed content, Codemasters will be opening up new opportunities for its online fan base, specifically by releasing games with built-in level editors. "It's something that is being worked on at present," Reid confirms. "There has been a lot of interest from fans who have created skin-developing software for *Insane* along with the supplied terrain editor. We are currently developing games with these thoughts in mind. *Operation Flashpoint*, due in May, has a mission editor as one of its key features. Players will be able to create their own missions and, because new mission files are small in size, they can be easily downloaded from Web sites or emailed to other players. Anything that helps interaction with fans of any of our products should be encouraged."





Fansite Kits

Create your own dedicated web site for one of our games using a unique **Fansite Building Kit**

Please read the legal notice carefully before using!

These zips contain jpeg images, sounds, logos, banners, themes, screensavers, videos and information to help you build your own branded web site

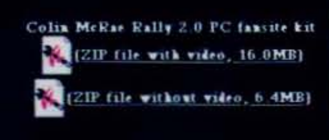




Colin McRae Rally 2.0 PC fansite kit

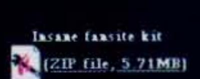
[ZIP file with video, 16.0MB]

[ZIP file without video, 6.4MB]



Insane fansite kit

[ZIP file, 5.71MB]





Do you know the way to GDC?

The greatest show on earth for codemonkeys is on its way to San Jose, but what will be the highlights?

In a year of platform transition, punters cut back on their game buying, but for developers it's the time to choose the tools and middleware that will be the foundation for the next round of games. That's why March 20-24 will be the Game Developers Conference's busiest days yet. While there won't be the excitement of Bill Gates announcing XBox, and no one is expecting GameCube to show, the occasion will be brimming with the latest nuts and bolts of game development, as this month's Codeshop demonstrates.

In addition to the expo part of the show, there will be keynote speakers such as *Sim* genius Will Wright talking about the diverse subjects which can be raided for inspirational game design, AI pioneer Marvin Minsky on 'Programs, Emotions, and Common Sense', and Naughty Dog's Jason Rubin tackling the potentially explosive subject of managing game projects more professionally, in a talk entitled 'Out Of The Garage: Maturation In Team And Project Management'. Here, **Edge** presents a number of engineering highlights.

URL
www.gdconf.com

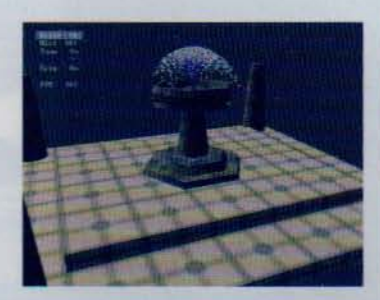
Criterion Software

One of the success stories of middleware has been Criterion's *RenderWare* 3D game development tool kit. "2000 really outstripped our expectations in terms of take up," says Criterion's president **David Lau-Kee**. "It's stunning to see the change. We imagined that we would get the small developers picking it up, but what we are finding now is it is the big guys, the big developers and the big publishers, that are coming to us."

Currently being used in more than 250 studios worldwide, the 'big guys' include Konami, Activision, Interplay, THQ, and DMA Design. Building on the feedback it has received, Criterion is now releasing a *RenderWare* complete game development package. "What we have seen through people using *RenderWare* is they are trying do 3D and they are trying to figure out audio and physics, and their AI. They try to buy in other solutions or write their own, and it's difficult," says Lau-Kee. "They want an integrated solution, and that's what we are going to be providing."

Based on the existing *RenderWare* package, Criterion is adding integrated audio and physics support. A licensing deal with audio specialist Sensaura provides 3D positional sound, which will be fully integrated with the graphics, enabling designers to set up occlusion and doppler effects. The in-house physics solution provides a sequence of effect-specific components, built on a low-level underlying physics/math library. "It's clear that those high-level physics solutions don't seems to be providing what game developers want, so we're not going down that route," points out Lau-Kee.

A deal with Finnish middleware provider Hybrid also sees additional functionality being added to *RenderWare*'s graphics capabilities. Hybrid's *RenderWare* plug-in will offer particularly impressive dynamic visibility code, speeding up games by minimising the drawing of geometry that is not in a player's line of sight.







Mist and water are generated using new particle plug-in for *RenderWare* (top); A bump-mapped fish running on *RenderWare 3* for PS2

URL
www.csl.com *www.renderware.com*
www.hybrid.fi *www.sensaura.com*

Game engines

Epic's Unreal Warfare

One of the big pushes in the games industry is engine technology – something that will be well represented at GDC. Epic has been pulling out all the stops for its *Unreal* engine. Under the name *Unreal Warfare*, it has recently released details of XBox-specific support. "Just as we referred to the 'Tournament' version of the *Unreal* engine to represent the feature set of the engine built between the releases of *Unreal* and *Unreal Tournament*, internally we'll refer to 'Warfare'," explains Epic VP **Mark Rein**; *Unreal Warfare* being the codename of an Epic game currently under development.

The current engine build, number 633, contains plenty of meaty figures. Hardware T&L is enabling the use of 200 times as many polygons as previously seen in *Unreal Tournament*, the engine can handle 2048x2048 textures, and support for the already impressive large-scale terrains has been improved. Other less obvious improvements include AI pathfinding enhancements – especially for hearing and sight – use of ladders and crouching ability, better integration with *3DS Max*, and distance fog support.





The latest build of the *Unreal* engine (build 633) is optimised for XBox and supports 2048x2048 textures

URL
unreal.epicgames.com (note no www)

NDL – NetImmerse

With Oddworld Inhabitants already hard at work with the *NetImmerse* engine, the latest build – version 4.0, containing new XBox features – will be forthcoming at GDC.

"Perhaps the most exciting and useful part of this release is the *AnImmerse* keyframe manager tool, a new tool that allows artists to quickly preview and prototype their animations," explains NDL president **John Austin**. *AnImmerse* enables artists to set up transitions between different animation sequences, specify a character model to apply the animations to, bind a key on the keyboard to each animation, and run an interactive rendered preview of the character moving using the animations.

Other additions include enhancements to the *3DS Max MAXImmerse* and *Multigen Creator MultImmerse* exporters, and a major overhaul of the *Maya MyImmerse* exporter. More generally, GameCube support is expected in Q2.

URL
www.ndl.com

Development tools

SNSystems – ProDG

Having added to its impressive range of PlayStation2 development tools through the year, the focus of SNSystems' attention has switched towards Nintendo. There's no mention of GameCube yet – although Metrowerk's expertise with PowerPC architecture will provide fierce competition in this area – but SN's Game Boy Advance devkit will be on display for the first time.

In terms of PlayStation2, the entire range of tools will be shown, including the Win32 ProDG tools and the network development kit for building and optimising TCP/IP code. More recent advances, such as the ProView tool and CD/DVD emulator, will also be attracting those still struggling with PlayStation2 development. ProView is a file-serving solution for linking PlayStation2 test and development units with a host PC via the PlayStation2's i.Link socket. The emulator allows the PlayStation2 development tool's hard disk drive to be used for creating and testing CD or DVD images.

Metrowerks – CodeWarrior

It has already been a busy year for MetroWerks. The company has announced support for Palm and Symbian handheld devices, released Version 2.5 of its PlayStation2 code, and gained official support from Nintendo for its GameCube release of the *CodeWarrior* integrated development environment.

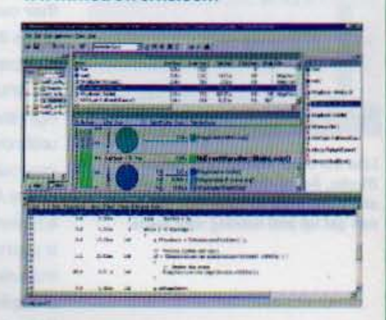
"At GDC we plan to show PlayStation2 and GameCube tools, including analysis tools and the Analysis Tool Construction Kit, which allows developers to write their own tools. This is a unique technology in the game industry," says Metrowerk's European field applications engineer, **Mark Baker**. Linux is also high on the list of new announcements with the x86 version of *CodeWarrior* released, and support for embedded Linux is on the cards as well.

URL
www.snsys.com



One of SNSystems' latest additions to its PS2 range is its ProView tool, a download and file serving solution for PS2 test and dev consoles

URL
www.metrowerks.com



Metrowerks intends to show PlayStation2 and GameCube tools at GDC, which will include the Analysis Tool Construction Kit

Networking tools

Proksim – Net-Z

With Sony still tight-lipped about the online capabilities of PlayStation2, Proksim will be publicly demonstrating its Net-Z networking technology for the first time on PS2, as well as previewing future support for massively multiplayer gaming.

"Proksim's unique approach to the challenges of managing thousands of users and their traffic is based upon the cell-based technology that we call duplication spaces. This solution for massively multiplayer gaming builds upon our duplicated objects foundation and forms the basis for our scalability efforts," explains Proksim's marketing manager, **Ken Trueman**, who suggests that there may be some further surprises on the cards at GDC.

This duplication-space approach divides a gameworld into smaller spaces and enables game objects to determine if they share a space without the intervention of the server. This has a significant impact on the use of bandwidth and the ability of game worlds to support higher numbers of players and objects.

URL
www.proksim.com

Terraplay

Swedish company Terraplay is showing version 1.3, the last build of its networking API for developers prior to the commercial launch of its online game service later in the spring. "We are getting a lot of interest, especially from people developing massively multiplayer online titles," says business developer manager, **Stefan Vlachos**. "For them it's tangible: they see the true benefits of Terraplay."

Before gamers start to see the benefits in improved online play, however, Terraplay has to start convincing ISPs to get onboard and buy its Game Access Servers (GASs). "We are working on improving the value chains for operators," Vlachos says, while promising that a partnership announcement will be made soon. "Exciting things are in the pipeline, but it's too early to say presently." But with crossplatform continuing to be the buzzword, expect Terraplay to start making noises about PlayStation2 and XBox support sooner rather than later.

URL
www.terraplay.com

Physics middleware

MathEngine

Expect big things from *MathEngine* at GDC – that's the story from the Oxford-based physics specialist. It will be showing what it is currently calling the 'finished version' of *MathEngine*. Capable of running on all platforms, it's more stable and more polished than before. But that's not the crucial point, according to business development manager **Paul Topping**: "It's not about better physics, it's about a faster implementation of physics while making games." The new *MathEngine* solution will be faster to optimise and also make prototyping of gameplay ideas quicker. "It's cutting the risk of putting physics into a game," Topping says.

Havok

Following the union of Irish physics company Havok with German outfit Ipion, work continues on the combination of their physics code into a coherent unit. "We plan to launch an updated version 1.5 of our über-engine," says Havok's communications director, **Paul Hayes**. The company's other offering will be a cutdown version of the 'hardbody and constraints' engine, which will be released at a lower pricepoint for developers who don't need the full softbody solution. The final package looks likely to be called 'Havok Hardcore'.

URL
www.mathengine.com



The 'finished version' of *MathEngine* will speed up the prototyping of game ideas

URL
www.havok.com

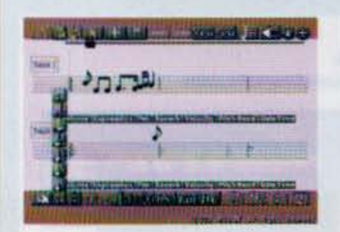


After the coming together of Havok and Ipion, expect the arrival of an 'über-engine'

PlayStation2 gets more BASIC

Japanese developer Artdink prepares to deliver a suite of apps to give budding coders a way in

ARTDINK



Like the other elements of *Basic Studio*, Score-Note is presented in a simplistic style in order that beginners can get up and running with haste

Bandai's little-known WonderSwan *Wonder Witch* package may have allowed Japanese users to create their own handheld software, but, unlike their UK counterparts, gamers in Japan have been denied the opportunity of chancing their arms at high-level coding on a 128bit console – until now. Created by Artdink, previously responsible for such titles as the *A-Train* series, *Basic Studio* is a powerful tool whose user-friendliness is pushed to the fore thanks to its modular design, delivering a number of applications around its shell (entitled B-Shell, logically enough).

EZ-Basic is the programming interface itself, suitable for experienced BASIC coders and also beginners, thanks to a 150-page manga-style manual. Using EX-Basic, more advanced users can even incorporate routines coded in C.

The Poly-Craft element is dedicated to building 3D models in a kind of simplified *3DS Max* environment somewhat reminiscent of Nintendo's 64DD *Mario Artist* module.

Image-Sketch, meanwhile, is the 2D part of the package in which textures and other bitmap imagery can be fashioned.

Accounting for audio content is Score-Note, which can be used to create both spot effects and compose musical accompaniment.

Sample code is provided for each element in order to demonstrate the package's potential (which is considerable), and libraries exist to provide users with stock code which can be experimented with (one notable segment enables coders to easily set up twoplayer split-screen gaming environments).

Scheduled for a Japanese release in April, at ¥9,800 (£58), *Basic Studio* will be upgraded and enhanced in due course, although it is not yet known what type of community support will be available via the Net.





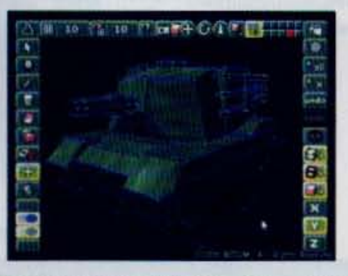
The EZ-Basic interface (right) can be pulled up so that it simply sits over whatever is being visually executed at the time. Much of the sample code seems highly polished (above)





This 3D robot game (above) is a good example of what users can achieve using good old BASIC on PS2. Artdink's libraries include split-screen code to allow for head-to-head gaming (right)







Diary of a videogame

Legal problems over, Brain in a Jar gets on with the job in hand

Brain In A Jar diary, part four
by managing director Matthew Gabriel



We had really hoped that we would be able to tell you all about our next product by now, but unfortunately a development deal has still to be done. We have talked to many people, and there are numerous possibilities on the drawing board, but the time it takes to do a deal is back to haunt us.

Our relationship with Acclaim has now been legally finalised. When a contract comes to a premature end, there will always be some legal issues to tie up, as some of you will know, and I have concerned myself with this task since the project was terminated. Thankfully, the process, though a little long, was resolved amicably, and we are now freely able to utilise our technology.

This technology is a set of code modules from which we are able to develop a wide range of driving-based applications. We are particularly proud of two of these modules: the car handling physics and the driver AI. As it wouldn't be appropriate for us to talk directly about any impending deals we have on the table, we thought this would be a good opportunity to share with you our thoughts on these two aspects of driving simulations.

We feel that there is much room for improvement to be made upon the game balance of current driving simulations. Playability and accessibility need not mean that the driving and physics models of the vehicles have to be compromised. It is quite possible to create a virtual vehicle which is both fun to drive and handles in a realistic manner. In fact, we would suggest that realistic car handling, if implemented correctly, would provide a much more fulfilling experience for the player. After all, do you know anyone that has been out on a track day and not loved the experience? Balancing a car with its tail hanging out while flying around a corner is an incredible feeling, and recreating that feeling in a game is the challenge. This is why we decided to create a very realistic car model and then tweak it for playability afterwards. We are some 90 per cent through development of this model now, and the results are very pleasing. It can be quite hard to drive to begin with, especially if you have no driver aids switched on, but after practice it feels great. We chose to add real driver aids to the engine, as many of today's performance cars include aids such as traction control. These are getting so good that they don't take the car away from you any more, just gently keep everything under control. This allows you to continue to learn how to drive on the edge, even if the aids are keeping you from falling over that edge.

The nice side effect of implementing a realistic car model is that there is nothing hard-coded for any particular car. This was obviously intentional, as we had intended to be adding different Ferraris to the games that we developed. It is quite possible to add a new car's setup to the engine by simply changing a vehicle's configuration. The hard part is finding out what these configurations should be. There are an enormous number of settings for each car, and most of these are not printed in any car magazines. A close working relationship with a car's manufacturer is therefore needed to represent the car accurately.

Another way that driving games take liberties with the player is with AI drivers. Incapable of producing quality opponents, games frequently pull such tricks as hidden catch-up of cars, predetermined crashes, superior vehicles, etc. Nothing is more frustrating than to get well ahead of the opponents and then make one little mistake and see the whole pack zip past as if they were only a few yards behind. This is perhaps an area of engine development that we have taken the greatest risk with. We decided early on to attempt to create AI based on evolutionary principles, starting from a baseline of two simple rules. The AI drivers would be evolved using genetic rules (survival of the fittest), and they should have no more information about the car and track than a real player. It's actually a very simple concept, and beauty often lies in simplicity. Initially, driver AIs are created with a random genome and are placed in a car, given control over the normal functions, such as throttle, brake, and steering, and let go. The AI driver that makes it farthest round the track will then become the parent of the next generation. To begin with you simply score drivers according to the distance they travel round the track. Many generations later you begin to evolve drivers that are capable of completing laps in very respectable times. The final effect of this does not present any advantages over hard-coded AI, but the next bit of evolution is where the strength of this system appears. At this point you can start to award drivers extra points for sliding the back end out, or gently nudging other cars. This driver is then more likely to become the parent of the next generation, and so you begin to evolve an aggressive driver. This module of code still has got a long way to go, but we feel confident that it will result in a substantial increase the driving and competitive realism.

Although brief, I hope I've shed a little light on the direction our racing engine is taking. Until next time, we wish you all luck through this turbulent time in the industry.

"Balancing a car with its tail hanging out while flying around a corner is an incredible feeling, and recreating that feeling in a game is the challenge"

Offering a more realistic driving game with all the fun is Brain In A Jar's goal





The making of…

Carrier Command

Publisher problems, rapidly changing plans, and a frantic development period: **Edge** boards RTS precursor *Carrier Command* and talks to coders Ian Oliver and Graeme Bird about the groundbreaking title

Format: **Atari ST/various**
Publisher: **Rainbird**
Developer: **Realtime Software**
Origin: **UK**
Original release date: **1988**

The original design brief was optimistic, to say the least. Armies of soldiers were to disembark from carrier craft, plunge through knee-high water, and fling themselves onto beaches in a fight to the death with war-crazed rivals. The *Carrier Command* which eventually emerged from Realtime Software's development hell may not have offered such dynamism, but its grace and strategic depth inspired a legion of clones.

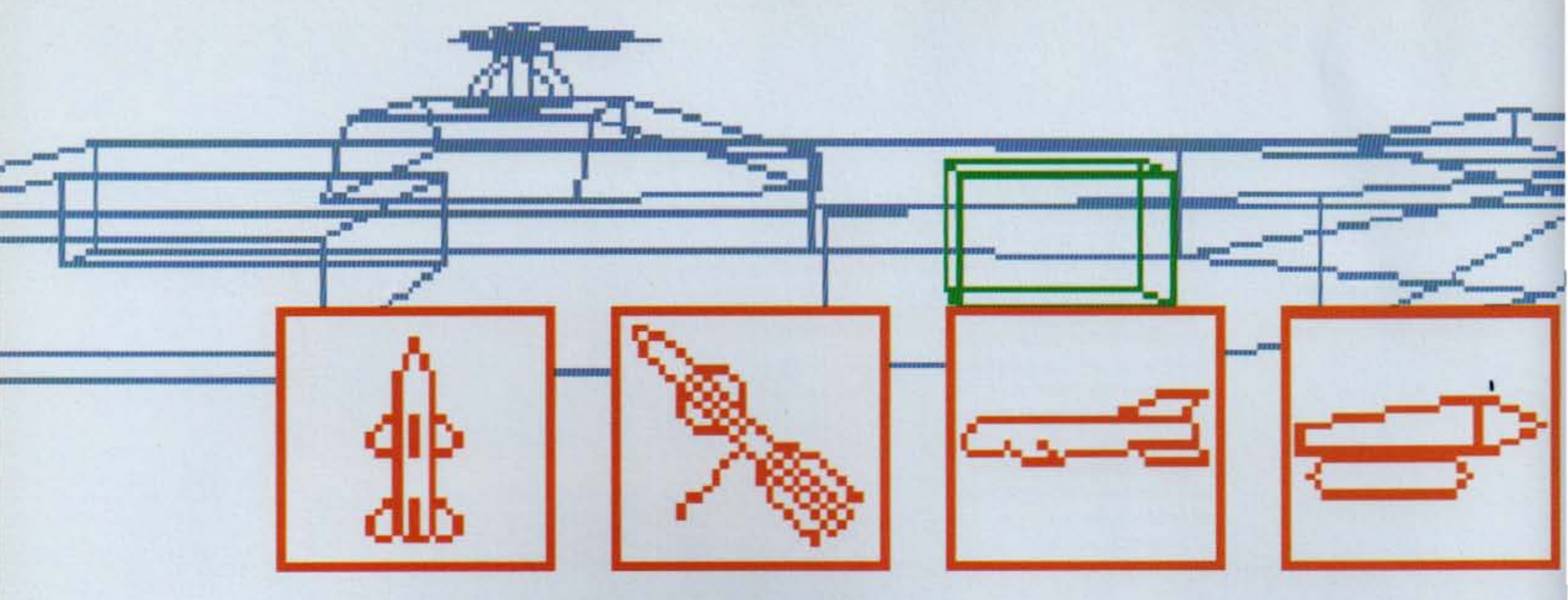
The title's evolution was a convoluted one. Realtime's trio of coders – **Ian Oliver**, Andy Onions and **Graeme Baird** – had been busy converting *StarGlider* for 8bit formats when Rainbird offered them a contract to develop a complex submarine combat game. "The idea was that mankind had been forced into the oceans after and alien invasion," recollects Baird. "You had to build underwater cities to produce your submarines, mine manganese nodules from the sea floor to power them, and build up you forces to oust the aliens. It was called *Submarine Combat Simulator*, which explains why *Carrier Command* was referred to as *SCS* throughout its development. Unfortunately, Rainbird had a falling out with the designer, and as the copyright issues over the design could not be resolved the project was ditched."



Playing *Carrier Command* back in '88 was an exhilarating experience. Manta fighter planes could be fuelled up and set on autopilot to do a flyover above the SS Epsilon

Realtime had already coded a substantial part of the game, and the contract still held. Rainbird held a crisis meeting, and eventually a single-page fax with a few bullet points landed on Baird's desk. It was to be the new outline for *Carrier Command*. "I remember being very dubious about it to start with," relates Baird. "I think they originally were thinking along the lines of the American fleet island hopping towards Japan in WWII, rather than the futuristic scenario we ended up doing."

Rainbird's Clare Edgely provided many of the initial ideas for the game, and design consultant Riccardo Pinto helped shape the overriding concept. "I guess Clare was involved in the brainstorming at Rainbird, and I'll happily accept it was her idea," concedes Oliver. "Riccardo was assigned to help us take the idea and run with it, but boy could that guy run fast. His design was massive and called for armies of



3D-rendered soldiers throwing themselves on to the beaches. But among all of this input was stuff we could use with ideas and inventions of our own."

Carrier Command was an engineering triumph and an armchair strategist's dream. The goal was simple, but reaching it called for meticulous planning and quick thinking under pressure. Faced with an archipelago of islands it was the player's task to take his carrier, the SS Epsilon, and build a supply network which would eventually spread across every territory. The challenge was made harder by a maverick carrier, the SS Omega, which was attempting to control the sector as part of a terrorist campaign.

It was *Carrier Command*'s range of sophisticated toys which became its defining feature. The SS Epsilon could open up like a toolbox to reveal compartments full of wonderful possibilities. It was armed with Manta fighter planes, Walrus amphibious craft, defence drones, and a host of resources including weapons, fuel, and base-building pods. "At the time we thought *Carrier Command* was groundbreaking because of the graphics," says Oliver. "But looking back, it's probably more so for the first of what are now *Command & Conquer*-style games. It really wasn't a game style people were used to, for both the depth of the objectives, the multiple viewpoints into the world, and the way the world was rendered."

Another striking feature was the comprehensive icon system. Though similar interfaces had been attempted before, *Carrier Command*'s point-and-click aesthetic was comprehensive, and could be overwhelming at first. Initial experimentation uncovered technical printouts, repair systems, data on craft types, and even options for setting resource priorities. Interestingly, their distinctive look was something of a fluke. "At the time Realtime had no artist and Ian wrote a little routine called 'Choccyblock' to show what he thought the buttons should look like," relates Baird. "Then he promptly went on holiday. By the time he got back the icon system was pretty much in its final state, with me drawing a bunch of little icons to represent the function of each button. These icons were later tarted up by an external artist, although to be honest he didn't do that much to them."

On the surface the AI in the game was robust, but Baird confesses that short cuts had to be made. "Let's face it, the processing power and memory limitations of the time just didn't let you be too clever," he admits. "We cheated anywhere and everywhere that we thought we could get away with it without compromising things too much." As for vehicle physics, Oliver is similarly unrepentant. "We didn't really have much – everything was faked, as real physics is expensive. Some things experienced gravity, some things bounced off each other, but for the most part we just coded up what worked and didn't care too much about reality." More seasoned *Carrier Command* players will remember the bug on the first ST version, which saw the enemy carrier carving its way through the islands from time to time.



Carrier Command was an engineering triumph and an armchair strategist's dream. The goal was simple, but required meticulous planning

But *Carrier Command*'s real beauty lay in its insistence on developing and nurturing an efficient supply network. Because the SS Epsilon could take up to ten minutes to reach each island, it was important to strike a good balance between creating defence islands, factory bases, and resource islands. Travelling back



to defend a weak network of resource bases could consume valuable time. Finding the weakest link in your enemy's network was vital. Cut off his chain of supply and his fuel and weapons resources would quickly dry up.

"Graeme coded all of the resource system using his background in roleplaying games and a lot of simulated 20-sided dice," jokes Oliver. "Quite how much of the complexity came out in the product I don't know, but behind the scenes it was important to run your campaign properly and defend your supply chain. Graeme also worked on the simulated battles for islands that happen if you don't have your carrier or a plane around to see them. These were tuned to try and match what would happen if the battle was being observed, and this tuning had to be good because you could suddenly arrive at a battle, so we'd have to try and mock up the stage it was at."

While complex battles were being simulated all around the map, the engine which kept everything in harmony within the player's ken remained relatively minimalist. "The game design was too big for the machine," continues Oliver. "We could have two islands active at one time, each with 64 objects on it, and we also had 64 objects in existence that were flying free of islands. Not only was that often a lot to render, but we also had to run the AI for all the objects, and, more importantly, had collisions to detect between all the objects. We worked together on the collision detection, which was handling some complex shapes, and ended up with it taking a negligible amount of time. I'm still not sure that anyone else is using the approach we came up with."

Coding the game took its toll on the team. "Let's just say that the job nearly killed us, and the stress level was very high"



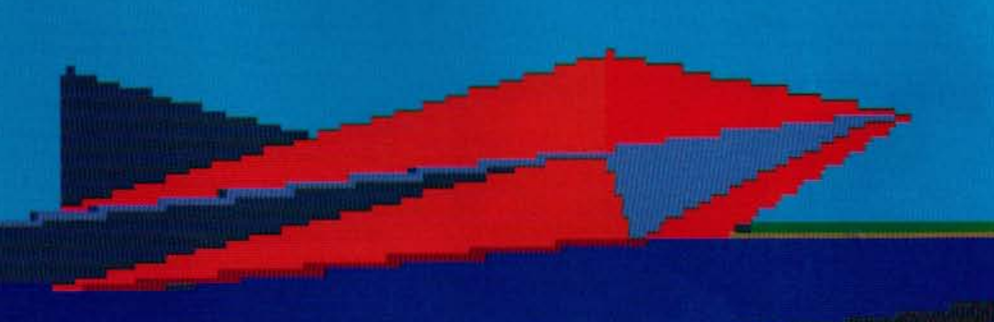






Carrier Command may have had one nasty bug (the carriers' tendency to sail across land, which was fixed on subsequent versions), but it still delivered easily the best resource strategy game of its time. However, coding the game took its toll on the small development team. "Technical nitty gritty aside, let's just say that the job nearly killed us and the stress level was very high," says Oliver. "The project was high-profile for Rainbird, and they had these things called budget periods that we didn't really understand. They used a mixture of promises, encouragement, and outright threats to get us to deliver, and despite the long gestation the project was undoubtedly rushed towards the end."

Oliver, Baird, and Onions (who coded the 8bit versions) certainly look back on Realtime with more fondness when they were knocking Spectrum games together out of a back bedroom in Leeds. Parties were held after their first hit, *Tank Duel*, made them a £20,000 profit, and again when the formidable *3D Starstrike* put £200,000 in their bank accounts. But the success of *Carrier Command* proved a different experience. "To be honest, I didn't really notice," laments Baird. "As soon as the first version was out of the door, and after a couple of days' sleep to recover, we were straight into doing the Amiga version and a second release of the ST version, so it all kind of passed me by." Oliver agrees: "They were pretty wild times, but in some ways *Carrier Command* represented a switch for us from programming for pleasure in an unbelievably casual environment, to doing it for gain with project plans and employees. And I really can't decide whether this was a good thing or not."

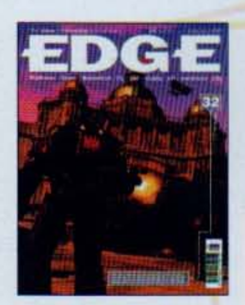


RESET

Where yesterday's gaming goes to have a lie down

reload

Examining gaming history from **Edge**'s perspective, five years ago this month



Issue 32, May 1996

Seconds out, round one. They're friends now, but five years ago the Sega-Sony catfight was in its infancy, with **Edge**'s lead story detailing a heated squabble over numbers. Five to one, two to one, evens… no, not the shortening odds on the revamped and repriced white Saturn winning the 32bit war, but rather the ratio of PlayStation to Saturn sales. "We believe we are outselling our competitors by a five-to-one ratio," declared former head of Sony, **Marty Homlish**. An informal survey at the start of 1996 by **Edge**'s sister mag in the US, *Next Generation*, suggested something closer to sales parity, and gave a little hope to fans of Sega's doomed machine.

Also reported was Howard Lincoln's promise that yet another N64 delay was only to allow Miyamoto-san "an extra few weeks to fine tune his already spectacular software," and Sega's steadfast refusal to get involved in the increasingly shaky looking M2 technology. A mere four reviews revealed May '96 to be a quiet month for gaming, but gamers got their first look at the now-ubiquitous mouse and keyboard method of FPS control via Ocean's *Dawn Of Darkness*. **Edge**'s cautious verdict? 'It feels a little strange.' The future often does.

DID THEY REALLY SAY THAT?
"Little girls, playing their little naked games with little boys, realise little boys have penises and little girls do not."
The ever-dependable **Chris Crawford** analogises the game industry's Hollywood envy, Freud style.

DID EDGE REALLY SAY THAT?
'**Edge** has only one grievance with the game so far – Fred Flintstone as the lead character. So what if the film made millions of dollars? Fred is just a reactionary swine with one joke.' Getting worked up over old Fred Flintstone? It must have been something in the coffee.

TESTSCREENS (AND RATINGS)
Night Warriors: Darkstalkers 2 (Saturn; 8/10), *Terra Nova* (PC; 9/10), *Civilisation 2* (PC; 9/10), *Spycraft* (PC; 8/10)



1



2



3

4



5



6

1. *Night Warriors*: another high-quality Saturn beat 'em up 2. The PC version of *Rave Racer*, obscenely requiring a P133 for 30fps 3. Sega's first doomed white console 4. The new Gallery section begins with a doctored Rembrandt work, courtesy of Shiny 5. A rendered Trocadero, without the virtual scallies 6. 'Sprout' technology in Cranberry Source's QAD

pixelperfect

The industry's favourites from yesteryear. This month, Rage senior project manager **Julian Widdows** remembers Bullfrog's *Syndicate*





Syndicate's apocalyptic weapons, varied gameplay, and perfect balance seduced Widdows

There are moments in life that you just don't forget – your first heartbreak, your first car, and, in my case, your first game of *Syndicate*.

After having had a long break from home gaming, I found it round a friend's house, installed on his brother's PC. It was the first proper PC game I had played, and when I pressed that mouse button and mowed down a line of pedestrians with the mini-gun for no other reason than that I could, I knew I had to own and play this game.

Within four weeks I had acquired my own PC, and just four-and-a-half weeks after that I knew the true meaning of game addiction.

There were just so many things about the game that I loved: apocalyptic weaponry; great level design; great balance between fast-paced attacks and pure stealth missions; and strategic decisions equipping your squad. I played the game three times over before I bothered to buy another PC game, and for some time after nothing quite met the standards set by *Syndicate*.

This is the game that made me want to work with games for a living, and to this day remains a favourite. Find it, buy it, and forever remember the moment you first fire the Gauss gun. Kaboom. That's all I can say.

FAQ

Gregg Barnett

Creative director, Empire Interactive

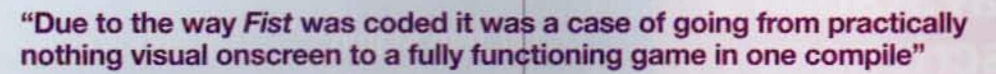


Having left sunnier climes down under back in the early '90s, **Gregg Barnett** spent several years at Perfect Entertainment before joining Empire as its creative guru.

What was the first videogame you played?
The first arcade game was *Pong*, and the first computer game was *Breakout*. In between there was *Colossal Adventure*, or whatever it was called, on a university Vax.

What was the first thing you ever created on a computer?
Other than the usual university stuff like printing 'Hello' with 30 COBOL punch cards, the first game-oriented thing was a F1 driving demo on the Atari 400. It was obviously all done with low-level graphic cheats rather than real 3D, but it looked good and helped me get my first job.

What was your first job?
In early '83 I started as a programmer with Beam Software in Melbourne, better known via its publishing wing Melbourne House. My first task was to program *Hungry Horace* on the C64. Between porting versions of *The Hobbit* to the C64 my first fully original title was *Way of the Exploding Fist*.


"Due to the way *Fist* was coded it was a case of going from practically nothing visual onscreen to a fully functioning game in one compile"

What's your favourite game of all time?
That would have to be *Mario 64*. While Mario had been an evolving series of games and gameplay components, it peaked beautifully with *Mario 64*. You had a wonderfully rich and complex game based on a few very simple gameplay elements – the epitome of great design.

What was the last game you played?
The last one was *American McGee's Alice*. I was attracted to it because it promised a pretty wild, imaginative trip, and it delivered on that front, but it really could have done with some of that *Mario 64* gameplay I mentioned before.

What's your favourite book, album, and film of all time?
Going back some time, a list of favourites that left an early impression would be any of HP Lovecraft's stories, Kate Bush's first album 'Kick Inside', and, for a film, 'Adventures of Robin Hood', being a good example of old-style Hollywood entertainment.

What game would you most like to have worked on?
Good games are usually indelibly linked to the very people that create them. That's part of why they are special. You can admire somebody's game but it would have been different, for better or worse, if you had worked on it. However, given a time machine and a choice of game to go back and do before anybody else did, it would be either *Super Mario Bros* or *Doom*. I could force myself to make do with either of their commercial or critical success.

Of all the games you've been involved with in the past, what's your favourite?
It's a pretty close call between *Way of the Exploding Fist* and *Discworld*, but I'd have to say *Fist*, as it was back in the 'golden days', so to speak. It was the first game that I was really passionate about. Also, due to the way it was programmed it was a case of going from practically nothing visual onscreen to a fully functioning twoplayer game in one compile (which in those days could take an hour). I can remember going to make a coffee and coming back to find a queue of people at my desk playing the game!

What are you working on at the moment?
I'm currently completely immersed in *Ghost Master*, a totally original game that defies all efforts to put it in a genre. Expect something different, as they say!

What stage is it at?
We're near the halfway mark, with a lot of content behind us and the bulk of the low-level technology done. We've got a tough year ahead of us to add all the bells and whistles that a game like this needs.

What new development in videogames would you most like to see?
Purely from an industry viewpoint we need one or two high-profile original titles that are capable of triggering a new genre. Things have gotten a little stale of late. From a technology viewpoint the boring answer is more affordable bandwidth so that the Internet gaming community can finally join the mainstream one.

What annoys you about the industry?
When you've been in the business as long as I have, what little wisdom you do accumulate tells you that whatever annoys you in this industry will annoy you a lot worse in some other industry. So it's best not worry about it, really. Just let the monkeys dance.

What do you enjoy most about working in the videogame industry?
The incredibly wonderful people, the unlimited wealth, the gorgeous sex-mad groupies, the dancing green monkeys... Also, it's the only job you can do while confined to a straitjacket in an asylum, which is nice.

Whose work do you most admire?
To round off a theme started earlier it would have to be Shigeru Miyamoto. His games exhibit complexity via simple and elegant design and certainly best typify games as an art form.

What new platform are you most looking forward to?
From a development standpoint XBox is the most welcome as it represents a console that is effectively one configuration of a relatively high-end PC. That is the best of both worlds for a developer, especially as what constraints it has are not too restrictive in nature.

inbox

Communicate by post:
Letters, **Edge**, 30 Monmouth Street, Bath BA1 2BW
Or email:
edge@futurenet.co.uk

I was looking over the specifications of the XBox when I thought to myself: 'This is supposed to be a 128bit machine, but what inside the XBox is in fact 128bit?' I found no answer to that question and to why, if nothing inside the XBox is 128bit, Microsoft shouldn't go even further and claim it to be 256bit. After all, having a GeForce 2 GTS in my PC, I know that NVidia GPUs are 256bit. However, the XBox's CPU, a Pentium III, is only 32bit.

This 'mistake' on the part of the hardware manufacturer has occurred before. Cast your minds back to the '16bit' SNES, which was really a twin-8bit machine. Such claims fool consumers into buying machines. I know many people who believe that all computers with the same bit rating have exactly the same power, and so higher bit ratings must mean a more powerful machine. What determines the bit rating of a console and how is it that manufacture can make these figures up?
Mehmet Sanliol, via email
And do you remember the Mega Drive's 'burst processing'? The term for this fictitious hardware element came out of a marketing department. They're the folk you need to point a finger at.

David Fowkes' comments (Inbox, **E**93) directly comparing XBox's specs to the PC were largely irrelevant. I would have thought it was obvious by now that the most important aspect of a format is the software that runs on it, not the bells and whistles in the box. Once you have a standard-spec format which hundreds of developers are very keen to be a part of, you're laughing.

Look at *Gran Turismo*. Can you think of a PC equivalent, even though the average PC has 64 times more RAM than the PlayStation? In fact, sorry to be controversial, but I can't think of a PC title from Y2K which I would call triple-A. The last PC game I bought was *Quake III* (Dec '99). Ten months later I contemplated buying *Grand Prix 3* or *Deus Ex*, but instead bought a Dreamcast. I cannot play *F355*, *JSR*, *MSR*, *Shenmue*, etc, on my PC, even though it has an Athlon 600, and 32Mb Geforce 256 (and I can hook my DC up to my PC monitor). Yes, the PC will always be the most powerful platform, but it will never provide the best games.
Matt Brady, via email

Being an ageing gamer at 27, I always enjoy your 'Making ofs…' Even if I have never even heard of some of the games featured – such as *Rebelstar* – I can still appreciate the insights that these games can provide.

While I can certainly relate to your bias towards Spectrum games out of nostalgia, patriotism, or convenience, I think it's a shame that you keep ignoring the wealth of classic titles for other systems like the Atari VCS, the C64, or coin-ops. Games that come to my mind include the seminal *Star Raiders*, *Marble Madness*, or Dennis Caswell's *Impossible Mission*. While it might be harder to track down the developers of these titles than your mates from the British mainland, a review of these titles in the light of the current state of the industry might well be worth it. After all, the world has more than eight colours – it's got at least 16.
Georg Lauteren, via email
'The making of…' will be looking further afield in the near future. Look out for *Space Invaders* soon…

In response to Donato Piccinno letter in **E**93, I don't believe he really understands what the industry is all about: it is a classic oligopoly.

There is a clear market leader in Sony, and its rivals in the form of Nintendo and Sega. But what am I getting at? The reason there is little customer service, and two types of memory card, etc, is because – as a market leader in an oligopoly – they are abusing their dominant position by abusing you, the consumer.

By pulling back on customer service they can reduce costs. By releasing two types of memory card that could do the same job they are differentiating their product. Sony don't like you, they just want you to buy their product and add to their five-trillion-Yen global revenue.

Oh, and another thing, whatever Sony tell you about the reduced supply of PS2, don't believe it. They are simply reducing supply to inflate demand and make the price less elastic. Simple.
Alex Westworth, via email

Is it just me, I wonder, or does anyone else find Sony's 'Third Place' campaign just plain bloody awful? Perhaps, at the farty old age of 37, I have missed the point. Or maybe the fact that it is full of ugly and pointless imagery suggests that someone is making a sly comment about the general quality of the PS2 launch titles.
Trevor Lawford, via email
Perhaps David Lynch should have teamed up again with Dennis Hopper. Maybe that would have injected some genuine character into the campaign.

I'm contacting you to point out that console history dictates that only two systems can operate in the same market. Currently that seems to be PS2 and, well, I think XBox has the best chance. I get a very, very strong feeling that Nintendo will end up in the same pit as Sega in that they'll end up scrapping their 'Bush lookalike' console and just



Georg Lauteren laments the choice of games to have made it into Edge's 'The making of…' to date, proposing the likes of *Marble Madness* for the future



Did a tight deadline force shortcomings to appear in *SSX*? Jasper Manchipp believes so, pointing towards the game's occasional framerate issues

produce games for XBox and PS2 (as well as satisfy the handheld market with GBA). I can hardly imagine people buying a GameCube just for *Mario 128* and a new *Zelda* title. People want to see lots and lots of games released on their system (with only a few decent titles), and with the popularity of PS2 and XBox, Nintendo will surely wilt in the heat of the kitchen. Nintendo made a mistake with the N64, and, just as was the case with the Dreamcast, nobody in this industry forgets a mistake like that.
Chris Marsh, via email

Will the industry ever mature to the point of developing a single console standard? With Sega stopping Dreamcast manufacture in March, another platform seems destined to die.

Surely a single standard would strengthen the industry? Sony, Nintendo, Sega and Microsoft could manufacture their own hardware which would play any game meeting the new standard. The Sony model might offer better lighting, the Sega model more visual memory – just as my 300Mhz Pentium runs the same games as my Athlon, albeit not as smoothly.

Other industries have shifted towards standardisation, lessening the risk of developing for the 'wrong' product and creating a level playing field for all companies, small and large. Consumer confidence wouldn't suffer from fears of rapid hardware obsolescence. With 128bit technology, a five-year standard could be set. Following Nintendo's GB example, backwards compatibility would account for five years beyond that.

If my Samsung DVD player could only play Samsung-compatible discs I wouldn't have bought it. Surely this applies to videogames?
Roel Koel, via email

If the videogame industry is to truly come of age, it clearly needs a single-format delivery solution – as has been mooted on these pages on numerous occasions. Sadly, the demise of Dreamcast as a platform is just a minuscule step towards the future.

During the last 18 months it has occurred to me that Microsoft's whole strategy is to market the XBox as an original next-generation console. The Intel chip at the heart of the machine is no more advanced than any other Pentium x86-based PC. Also, the GPU is no more than a customised version of the existing NVidia hardware.

What Microsoft should be selling themselves on is where they are really different... Oh, hang on, how *are* they different? Certainly not with their games, stolen in a vein attempt to scare Sony, or just the same old rehashed genres. So where will their originality come from? Why should my gorgeous PS2 be cast aside while I adopt a Microsoft VCR lookalike? I think Microsoft think they are fighting Apple again and are underestimating the power of PlayStation. Upping the processor speed to an average Pentium III speed of 733MHz really doesn't mean a thing. A RISC-type processor, the heart of all Apple Macs and consoles except the XBox, is far faster than an x86 chip. How else could the Apple G4 running at a mere 450MHz be classified a weapon? The Emotion Engine is even more complicated than that, being the only RISC chip of its micron level (that I know of) in common use.

I own a supercomputer; what might an XBox purchaser eventually own? An expensive DVD player, and it can't even do that out of the box. Microsoft should stick to what it does best – making PCs crash.

(Oh, and I don't own a Mac, so I have no beard, sandals or matching tartan golf-style socks.)
Alex Winn, via email

I bought *SSX* for the PS2 and am generally very pleased with it. One of my favourite aspects is how fast and smooth the game can run. This for me is where true believability comes into play. When you play a game (*Wipeout*, *G-Police*, *GoldenEye*, etc) that crawls to a 'flick book' frame rate during periods of intense action, it completely destroys the flow of the game and thus the illusion that has so carefully been created.

I wonder if developers, when confronted with new hardware, simply try to push too hard, too far, and too quickly. Undoubtedly if *SSX* was created again from scratch with the knowledge gained, the developer may well be able to achieve a faster, more constant frame rate. Having bought *TimeSplitters*, I feel that this game was created with a more logical understanding, by analysing what they could achieve, and how many polygons they could push, etc. They have created a great game that doesn't fall apart when things get tough.

Does **Edge** agree that when given new technology, developers push too far in too many directions at once, and by doing so they detract from what could otherwise be a fantastic game?
Jasper Manchipp, via email
Yes, ambition can be the most tortuous beast.

I have just read Stuart Dell's letter in issue 94, and also the editorial response. It has driven me, for the first time since buying issue one, to write to you. I don't give a monkey's if he is a faker of the first order, he raised a very pertinent point, which you cleverly ran away from in the editorial response.

> 'What might an XBox purchaser eventually own? An expensive DVD player. Microsoft should stick to what it does best – making PCs crash'



Jamie Smith thinks Edge should go a bit easier on forthcoming consoles such as Microsoft's capable XBox

When these wankers who claim to be designing fantastic game features fill you full of shit, do you:
a) Ask for at least a little proof of the features before you print their bollocks; or:
b) If you have been stung before by these arseholes, you remember this fact the next time you interview them?

I want to hear your response to the points he raised. No, bullshit detection technology does not exist, but hopefully the experience and intelligence of your reporters will stand us, your readers, in good stead. Then again, maybe not.

Gary Threlfall, via email

Okay, picture the scene: **Edge**'s correspondent, taking on board your own brand of parlance, is sitting down to talk with an NCL representative about his plans for GameCube projects...

Edge: Right. So, GameCube, then. What sort of new games are Nintendo working on for it?

NCL: We've thought long and hard about what the new graphical capacity can add to videogames, but also about the controller...

Edge [interrupting]: Yeah, sure, but come on. Wankers like you lot are always making lofty claims about what you're going to do with new hardware. Come on, prove it!

NCL: Er... But we're only ten months into production. What do you want to see, exactly?

Edge: Stop avoiding the point!

NCL: Um... Well, as I say...

Edge [interrupting again]: Oh, sod this. If you can't show us, bollocks to it.

Ultimately, you're calling for **Edge** to use time-travel technology in order to see whether or not developers' claims come to fruition. Which, like bullshit-detection tech, does not exist.

But then not everyone shares your standpoint...

Having bought Edge for a long time, I have noticed that of late there has been a rather unhealthy cynicism in the mag with regard to the gaming industry as a whole, as opposed to its traditional hard-but-fair approach.

For example, in last month's mag almost every article ended with something like 'there is still the capacity to disappoint' in relation to the XBox, 'too little, too late' in discussing Sony's PS2 launch in Europe, or you always appeared to be 'cautiously' awaiting a game release! Why so?

I am not suggesting that **Edge** should put on rose-tinted glasses and lavish false praise where it is not warranted, but it does seem to have lost much of its passion and enthusiasm for a fascinating industry that is, after all, all about entertainment. This is reflected in the 'every silver lining has a cloud' tone in which you mag now appears to be written, making it read more like an overly analytical academic paper than the gaming world's finest authoritative read on the state of the industry.

With the demise of Sega as a hardware manufacturer, and Sony's launch less than astounding, the industry is in for a period of significant change, but this is a period of unparalleled opportunity for the hardcore gamer with the likes of GameCube and XBox on the horizon. Perhaps, whilst maintaining a healthy constructive critical distance, this should not be at the expense of why we love games in the first place.

Edge is still without a doubt the most authoritative and intelligent read in the gaming press, but it should be wary of becoming overly analytical and jaded in its reporting.

Jamie Smith, via email

When houses are made of gingerbread, and flowers have smiley faces, **Edge** will report on it.

'I am not suggesting that **Edge** should put on rose-tinted glasses and lavish false praise, but it does seem to have lost much of its passion for the industry'

From the forum

A selection of choice cuts from Edge-Online's discussion outlet

Yes, downloading a copy of a game is the same as lifting a copy off the shelf at Electronics Boutique. The one in the shop is simply a physical representation of the software – ie, the disc. Instead of ripping off crap games like *FIFA*, why don't you just ignore them and buy decent games which are worthy of your time and money? I don't see the point in pirating a game that is crap, anyway. If you're buying the copy off a pirate, what use is there in allowing them to profit from games which most well-informed gamers wouldn't buy anyway?

Nevyn

I lament that in Britain we have no (to my knowledge) real VS arcade machines. What I really mean by these are the likes of back-to-back *Tekken*, *Soul Calibur*, and *Guilty Gear X* for people to challenge each other on. It sounds like such a simple thing, but while I was in Japan, I was hooked on VS *Soul Calibur* and VS *Virtua Tennis*. What was great about these machines is that you could really test your gaming skills against others without the embarrassment of asking someone if they fancied a game. It just became a complete addiction for me to walk into any arcade I walked past and challenge people.

Tokuda

I'd have to say that the review of *Shenmue* was spot on, if not to the taste of more zealous Sega fans. There seems to have been a slight change in style of **Edge**'s reviews recently, for the better. And when will the eternal debate over review scores end?

Jaimo



Next month: where the action is

Edge visits Treasure, one of Japan's most elusive codeshops, and discovers what CEO **Maegawa Masato** means when he says, "No other type of game would create these feelings inside you and make you cry, 'Gaaagh – this is it!'"




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MARCH 2001
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